



Volume 46, Number 5

**JANUARY 2005**

Editor: *Ginger Schulz*

Visit the new Rocky Mountain ASHRAE website: [www.rockymtnashrae.com](http://www.rockymtnashrae.com)

**Date:** January 5, 2004

**Cost:** Rocky Mtn Chapter Members-\$25\*

\*With Reservations Made Before Monday Noon

**Dinner** Wynkoop Brewing Company

**Location:** 1634 18th St.

Denver, CO 80202

(Downtown, Corner of 18<sup>th</sup> & Wynkoop)

Guests, Non-members or Without Reservation - \$30

Students - \$20

**RSVP: Scott Martin**

E-mail: [smartin@rmhgroup.com](mailto:smartin@rmhgroup.com)

**Time:** 5:30 Social Hour (Wynkoop)

6:30 Dinner (Wynkoop)

7:00 Program Begins (Wynkoop)



## January Program



**Program Speaker Dave Willetts J.L. Hermon & Associates, Inc.**

### **Evaporative Condensing vs. Air Cooled Condensing**

Dave Willetts will compare Evaporative Condensing to Air Cooled Condensing and the different advantages and disadvantages of each when used by grocery stores. His comparison will include the basic similarities and differences, a brief description of both systems, first and life cycle costing, compressor lift, defrost and much more.

Dave holds both undergraduate and masters degrees in mechanical engineering and has working in the industry since 1966. He was the Director of Application Engineering and Product Planning for a major equipment supplier before moving to Denver and eventually becoming a partner at J.L. Hermon. Dave is now semi-retired but still involved in our industry.

See everyone at the Wynkoop.

Kevin Parrot



# President's Message



Hello Members,

We had a great meeting last month! Tim Wentz, an ASHRAE Regional Vice Chairman, came to visit us and talk about the past and future of ASHRAE. This is of particular importance not only for its entertainment value, but because we need to figure out how a 100 year old organization like ASHRAE can survive in the fast, modern, computer age. Tim offered several suggestions and we also got good input from the members. Thanks to everybody for participating.

Last month was also Past President's recognition night. We were lucky enough to have 13 of our past ASHRAE presidents in attendance. Thanks to those who could make it and thanks especially for your past service to ASHRAE.

We have several big events coming up and a couple of them require volunteers. The first one is our annual technical conference in May. See Brian Lynch or myself if you want to speak at or volunteer for this conference. The second event is the ASHRAE Annual Meeting which will be in Denver on June 25-29. As the host city for about 3,000 people from all over North America, we will need volunteers to help visitors with questions and staff a hospitality booth. See me to volunteer.

Finally, see the ad in this newsletter for our annual DU Hockey Night event. We expect a great turnout this year since it's pretty much the only hockey in town! Don't delay in turning in your reservations for tickets.

Thank you all for your help and continued support of our ASHRAE organization.

David Rodenberg  
drodenberg@long.com  
ASHRAE Rocky Mountain Chapter President





# Past President's



Here's a Great Big THANK YOU to the past Presidents who attended last month's meeting!



ASHRAE Past Presidents in attendance (from left to right): Randy Wartner, Jay Sproul, Vic Olson, Jerry Kiel, Robin Adair, Gary Schaffer, Lynda Rodenberg, Kevin Ainsworth, Scott Spinney, Michael Haughey, Bob Pagliasotti, David Olson, and Mike Fulton.

We appreciate all of your hard work throughout the years.





# ASHRAE ROSTER



## Rocky Mountain Roster

|                     |                 |                                                                                  |
|---------------------|-----------------|----------------------------------------------------------------------------------|
| President           | Dave Rodenberg  | <a href="mailto:drodenberg@long.com">drodenberg@long.com</a>                     |
| President Elect     | John Stumpf     | <a href="mailto:john@burchassociates.com">john@burchassociates.com</a>           |
| Vice President      | Kevin Parrot    | <a href="mailto:KevinP@trinity-mechanical.com">KevinP@trinity-mechanical.com</a> |
| Secretary           | Brian Lynch     | <a href="mailto:brian.lynch@york.com">brian.lynch@york.com</a>                   |
| Treasurer           | Scott Martin    | <a href="mailto:smartin@rmhgroup.com">smartin@rmhgroup.com</a>                   |
| Newsletter Editor   | Ginger Schulz   | <a href="mailto:gschulz@murphy-den.com">gschulz@murphy-den.com</a>               |
| Membership          | Larry Hodgins   | <a href="mailto:lhodgins@empiregas.com">lhodgins@empiregas.com</a>               |
| Refrigeration       | Dave Rodenberg  | <a href="mailto:drodenberg@long.com">drodenberg@long.com</a>                     |
| Historian           | Steve Maxson    | <a href="mailto:smaxson@sbengr.com">smaxson@sbengr.com</a>                       |
| Technology Transfer | Jeremy Hollands | <a href="mailto:jhollands@catorruma.com">jhollands@catorruma.com</a>             |
| Resource Promotions | John Stumpf     | <a href="mailto:john@burchassociates.com">john@burchassociates.com</a>           |
| Web Master          | Kyle Manske     | <a href="mailto:kmanske@comfortsystemsusa.com">kmanske@comfortsystemsusa.com</a> |
| Education Chairman  | Kevin Ainsworth | <a href="mailto:kainsworth@mcgrath-inc.com">kainsworth@mcgrath-inc.com</a>       |
| Director            | Lynda Rodenberg | <a href="mailto:Lfuller@mcgrath-inc.com">Lfuller@mcgrath-inc.com</a>             |
| Director            | Kate Allen      | <a href="mailto:kallen@caveoeng.com">kallen@caveoeng.com</a>                     |







# RESEARCH



## ASHRAE Research Donor of the Month

I would like to inform all our members that your Board of Governors (BOG) have once again meet the full circle award by donating at least \$100.00 each to ASHRAE Research. We are currently in the middle of our 2004-2005 ASHRAE Research drive that ends June 2005, so we are looking for corporate and individual support from our local members. We will be starting a calling campaign in January so expect a call from one of the members of the BOG come January.

We have another program that we do at our dinner meeting called 50/50. We raffle off a gift from an individual or company and 50% of the monies raised goes toward research and the other goes into a pot. I want to thank Patrick Burch from Burch Associates, Inc. for the wine basket that was raffled off at the December dinner meeting. Congratulations to Gary Shaffer for winning the fine wines. We raised an additional \$180.00 that evening, thanks to Ginger, so you now have a one and five chance to win at least \$300.00 at our next meeting.

I want to wish all of you a Happy New Year.

John Stumpf  
Resource Promotions





# HOCKEY



## ASHRAE HOCKEY NIGHT AT DU



That's right, it is time again for the Annual ASHRAE/DU Hockey Night. Once again this year's event will have the National Champion DU Pioneers battling the University of Alaska at Anchorage Seawolves on Friday, January 28 at 7:35 p.m. The game will be played at Magness Arena in the Ritchie Center at DU. Tickets for the game are \$19 for adults and \$14 for children 12 and under. We have secured 61 seats, first come-first serve. As always, door prizes will be given out at the intermissions. So please come and join us for another fun filled night of DU Hockey.

You need to decide quickly, "no loli-gagging"! Mike needs to know by Monday, January 10!

Name: \_\_\_\_\_

Address: \_\_\_\_\_

Tickets:      Adults \_\_\_\_\_ X \$19 = \_\_\_\_\_  
                 Children \_\_\_\_\_ X \$14 = \_\_\_\_\_  
                 Total    = \_\_\_\_\_

Please make checks payable to Rocky Mountain Chapter ASHRAE and send to:

Mike Day  
c/o M-E Engineers, Inc.  
PO Box 5740  
Avon, CO 81620  
Ph: 970-949-6000 Fax: 970-949-1959





# ANNOUNCEMENTS



## **ASHRAE/SMACNA COLORADO 2005 HVAC&R MECHANICAL EQUIPMENT & PRODUCT DIRECTORY**

Available for purchase in mid January for \$40 a copy.

A complete list of available product lines and services makes this directory an invaluable resource! It includes current product and contract information for representatives, distributors, wholesalers, engineers, contractors and other related businesses within the HVAC&R industry.

Look for it at the monthly ASHRAE meeting or contact Kate Allen, Caveo Consulting Engineers at 720-200-5955 or [kallen@caveoeng.com](mailto:kallen@caveoeng.com).

## **Chapter Volunteer Activities!!!!**

The following Chapter Committees need new members: Chapter Technology Transfer, Historian, and Education.

## **Let ASHRAE Train Your Employees!**

The ASHRAE Learning Institute can offer a 1-day Professional Development Seminar to any interested companies or groups. The benefits include: Continuing Education Credits (PDH and LU), the opportunity for members to attend a high quality seminar presented by a nationally recognized instructor(s) for a registration fee of \$250, the technical material will be free from commercialism and peer reviewed for technical accuracy, and 60% of the revenue earned stays with the Rocky Mountain chapter. Available topics are as follows:

- Optimizing the Design and Control of Chilled Water Plants
  - System Selection and Report
  - Determining Energy Savings from Performance Contracting Projects-Measurement and Verification
  - Economic Analysis of Engineering Projects: Life-Cycle Costing
  - Understanding and Specifying Basic BACnet Systems
  - Building Retrofit for Energy Efficiency

The local ASHRAE chapter will take care of setting up everything. A minimum of 10 attendees is required to present this seminar. Please contact David Rodenberg, [drodenberg@long.com](mailto:drodenberg@long.com) if interested.





# ANNOUNCEMENTS



## **Summer Meeting Announcement**

The upcoming 2005 Summer ASHRAE Meeting will be held next June in Denver at the Adams Mark Hotel. Opportunities are available for participating on the Summer Meeting Planning Committee. This committee will coordinate with Society the planning of the event. In conjunction, the local chapter is requesting volunteers for monitoring the workshop sessions and being ambassadors for Denver activities. If you are interested in helping out please contact Dave Rodenberg, [drodenberg@long.com](mailto:drodenberg@long.com)

## **Membership Advance**

Be recognized by your peers and rewarded by ASHRAE for advancing your membership grade

Grade advancement means a Student Member becomes an Associate or Affiliate Member, or an Associate or Affiliate Member becomes a Member. There is no change in annual dues upon advancing from Associate Member to Member.

Advancement to Member criteria:

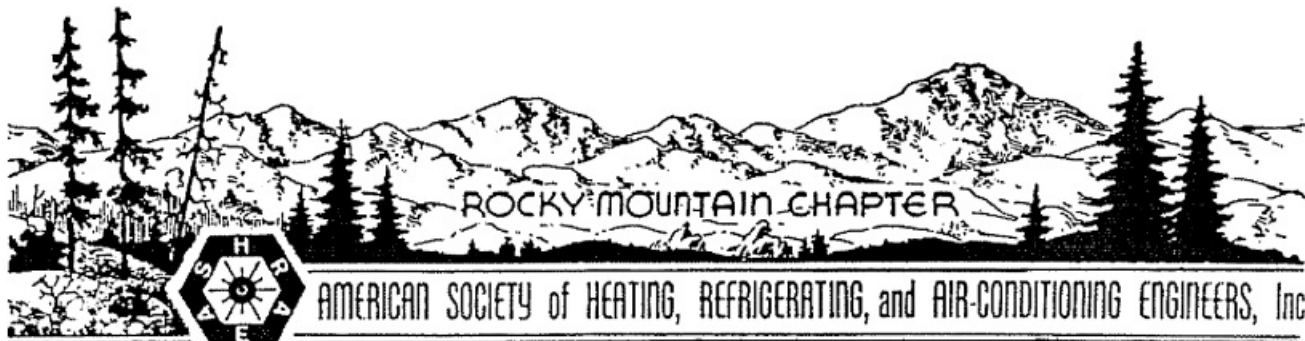
At the time of advancement, a member shall have the equivalent of twelve (12) Society-approved years of experience composed of an approved combination of the following:

1. Completed education beyond high school
2. Work experience in research, teaching, design, contracting, engineering sales and engineering management
3. Professional engineering or related registration or license issued by a legally authorized body.

The *Application for Membership Advancement* is available from the chapter's Membership Promotion Chair, or online at [www.ashrae.org](http://www.ashrae.org).

Members advancing their grade will receive a new membership card and certificate, and a \$20.00 coupon from ASHRAE redeemable for annual or winter registration fees, publications, or logo merchandise.





NAME: \_\_\_\_\_ , \_\_\_\_\_ , \_\_\_\_\_  
 (LAST) (FIRST) (MI)

STATUS: RENEWAL \_\_\_\_\_ NEW MEMBER \_\_\_\_\_ ADDRESS CHANGE \_\_\_\_\_

PLEASE CIRCLE PREFERRED MAILING ADDRESS:

HOME ADDRESS

BUSINESS ADDRESS

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

PHONE \_\_\_\_\_

PHONE \_\_\_\_\_

email \_\_\_\_\_

I WOULD LIKE TO BE CONTACTED ABOUT SERVING ON ONE OF THE FOLLOWING COMMITTEES OR FUNCTIONS (PLEASE CIRCLE).

- |                       |                                 |                     |
|-----------------------|---------------------------------|---------------------|
| A. MEMBERSHIP         | H. RESEARCH FUND PROMOTIONS     | O. NEWSLETTER       |
| B. ROSTER             | I. MONTHLY MEETING PROGRAMS     | P. SOCIAL COMMITTEE |
| C. MEETING ATTENDANCE | J. PUBLICITY                    |                     |
| D. EDUCATION          | K. LADIES NIGHT                 |                     |
| E. GOLF               | L. COLORADO ENGINEERING COUNCIL |                     |
| F. CHAPTER HISTORIAN  | M. GENERAL (COMMITTEE HELP)     |                     |
| G. TECHNICAL SEMINARS | N. ENERGY COMMITTEE             |                     |

PLEASE MAIL THIS INVOICE AND YOUR CHECK FOR \$35.00 (PAYABLE TO **ROCKY MOUNTAIN CHAPTER ASHRAE**) TO THE FOLLOWING:

LARRY HODGINS  
 EMPIRE GAS & ELECTRIC EQUIPMENT COMPANY  
 1635 W. 13<sup>TH</sup> AVENUE, DENVER CO 80204

303.886.5577

[rmc-ashrae@ljhpe.com](mailto:rmc-ashrae@ljhpe.com)

[www.rockymtnashrae.com](http://www.rockymtnashrae.com)





## JANUARY EMPLOYMENT LISTINGS

Position: Project Engineer  
Company: The Ballard Group, Inc.  
Main Phone: 303.988.4514  
Fax: 303.988.4517

Address: 2525 South Wadsworth Blvd., Suite 200, Lakewood, CO 80227

Contact: Steve Franz  
Contact Email: [sfranz@theballardgroup.com](mailto:sfranz@theballardgroup.com)

### More Info:

The Ballard Group is a mechanical design firm that has been in business since 1979. We design HVAC, plumbing and fire protections systems for a wide variety of installations, including hospitals, recreation centers, k-12 and higher education.

We are looking for employees who are dedicated, career-minded, and have a desire to develop a full range of skills related to mechanical design. The ideal candidate will have some high quality design experience related to the types of work noted above. A wide range of experience levels will be considered, and salary will be commensurate with experience. There are opportunities both in the HVAC and plumbing sides of our business.

If you are seeking a supportive environment that has opportunity for learning and growth, and you have drive and determination, we would like to consider you for a place on our team.

=====

Position: Mechanical Engineer  
Company: M-E Engineers, Inc.  
Web Site: [www.me-engineers.com](http://www.me-engineers.com)  
Main Phone: 303-421-6655  
Fax: 303-421-0331  
Address: 10055 W. 43<sup>rd</sup> Ave., Wheat Ridge, CO 80033

Contact: Trish Lovato  
Contact Phone: 303-421-6655  
Contact Email: [tlovato@me-engineers.com](mailto:tlovato@me-engineers.com)

### More Info:

M-E Engineers, Inc. is a national engineering firm seeking Mechanical Engineers to work on sports facilities, laboratories, health care and commercial projects. Preferred candidates should have 3+ years experience in the design of HVAC and plumbing systems. These positions require strong technical abilities, organizational skills and attitude. PE preferred. Excellent salary and benefit package. Send resumes to : M-E Engineers, Inc. Attn: Trish Lovato, 10055 W. 43<sup>rd</sup> Ave., Wheat Ridge, CO 80033 or e-mail: [tlovato@me-engineers.com](mailto:tlovato@me-engineers.com).







# EMPLOYMENT



Position(s): Application Engineers, Project Technicians,  
Account Manager, and Warehouse Person.  
Company: Setpoint Systems Corporation  
Web site: [www.setpointsystems.com](http://www.setpointsystems.com)  
Address: 2680 S. Platte River Drive, Denver, CO 80223

Contact: Aaron Nahale  
Contact Email: [anahale@setpointsystems.com](mailto:anahale@setpointsystems.com)

**Applications Engineers:** Setpoint Systems Corporation is an award-winning temperature controls contractor serving Colorado, Wyoming, and New Mexico since 1983. We are in search of engineers to design control systems for HVAC applications. Position requires at least three years of experience to include AutoCAD; working knowledge of DDC, electric and pneumatic control systems for commercial, industrial and institutional buildings; analytical and organizational skills. Extensive product training provided by employer. Salary commensurate with experience.

**Project Technicians:** Responsibilities include developing, assisting and maintaining the design of temperature control systems and related products for award-winning HVAC systems for commercial, industrial and institutional facilities; project planning and scheduling; project start-up; checkout, turnover, training and postmortems; and developing, generating and maintaining project documentation. Extensive product training provided by employer. Salary commensurate with experience.

**Account Manager:** Responsibilities include customer development; cost estimating of pneumatic, electric and electronic temperature control systems for commercial, industrial and institutional HVAC systems; design/build budgeting; energy conservation analysis; and negotiating contracts with mechanical contractors and end-users. Trains customers, contractors, end-users and engineering and facility managers on controls, DDC and HVAC. Qualifications include working knowledge of DDC, electric and pneumatic control systems; analytical and organizational skills. Extensive product training provided by employer. Salary commensurate with experience.

**Warehouse Person:** Responsibilities include shipping and receiving, inventory control, product inventory and tool inventory. Works closely with purchasing manager. Qualifications include good people skills, analytical and organizational skills and good driving record. Extensive product training provided by employer. Opportunity for advancement within company. Salary commensurate with experience.

**Setpoint Systems offers a complete benefits' health package, including 401(k) contribution matching and tuition reimbursement. EOE M/F/D/V.**





# EMPLOYMENT



Position: Mechanical Engineer/Designer  
Company: Integrated Mechanical Systems  
Main Phone: 303.794.4822  
Address: 6650 South Vine Street, Suite L10, Centennial, Colorado 80121

Contact: Dave Olson  
Contact Phone: 303.794.4822  
Contact Email: davidolson@imshvac.com

## More Info:

Established full service engineering firm seeks HVAC Engineer/Designer, 10 to 15 years experience, PE preferred. Competitive salary, simple IRA, overtime pay, health insurance, dental, sick time and paid vacation. Consider joining our casual, small, non-smoking office in Littleton. Please send resume and list of references.

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Position: Piping Detailer/Designer  
Company: Trautman & Shreve, Inc.  
Web Site: [www.trautman-shreve.com](http://www.trautman-shreve.com)  
Main Phone: 303-295-1414  
Fax: 303-295-0324  
Address: 4406 Race Street, Denver, CO 80216

Contact: Personnel Department  
Contact Phone: 303-295-1414

## More Info:

### Qualifications:

- Minimum 5 years experience in routing, coordination, and detailing of piping for HVAC or plumbing systems for hospitals, labs, commercial office buildings, etc.
- Proficient in Auto CAD 2000 or higher.
- Minimum 1year experience working with 3D-CAD software (Quickpen 3D pipe designer strongly preferred).
- Ability to create 3D-coordinated shop drawings in a multi-discipline environment.
- Familiarity with isometric and fabrication drawings.
- Exposure to Navis Works viewing and collision check software.
- Committed to meeting short-duration schedules.
- A proven record of accomplishment and verifiable references are required.





# EMPLOYMENT



Position: Energy Engineer  
Company: AMEC Earth & Environmental  
Web Site: [www.amec.com/earthandenvironmental](http://www.amec.com/earthandenvironmental)  
Main Phone: 303-935-6505  
Fax: 303-935-6575  
Address: 550 S. Wadsworth Blvd., Ste. 500, Lakewood, CO 80226

Contact: Lyman Parkhurst  
Contact Phone: 303-935-6505  
Contact Email: [lyman.parkhurst@amec.com](mailto:lyman.parkhurst@amec.com)

## More Info:

AMEC performs energy audits and related energy conservation services for our clients. A junior-level engineer interested in performing audits and energy saving analyses of HVAC, building envelope, mechanical, electrical, and utility systems. Knowledge of energy management principles and terms and utilities required. Some previous experience in energy conservation, mechanical design, or sustainable building principles desired.

Requirements: Mechanical engineer preferred, but also consider electrical, general, architectural and related degrees. EIT minimum and ability to obtain P.E. Travel required. Audits require outside work, climbing ladders and working at heights, and some high noise/temperature conditions. US Residents Only. Competitive benefits including immediate vacation and sick time accrual, 401k w/ company match, education & training.

AMEC is an international consulting company headquartered in the UK. AMEC E&E is based in North America and performs environmental, engineering, and natural resources services. We serve government and commercial clients nationwide as well as select international locations.



## FIRST CLASS

Chapter may not act for Society. Expressions, opinions, and comments within this newsletter should not be taken as those of the Chapter or Society.

Rocky Mountain Chapter of ASHRAE  
c/o Ginger Schulz  
Murphy Company  
3790 Wheeling Street  
Denver, CO 80239



# ACTIVITIES CALENDAR



For membership info or change of address contact: Larry Hodgins • Empire Gas • lhodgins@empiregas.com

### ASHRAE Events

|                           |                                                     |
|---------------------------|-----------------------------------------------------|
| January 5 <sup>th</sup>   | Dinner Meeting Topic: Water Cooled Refrigeration    |
| January 28 <sup>th</sup>  | DU Hockey Night!!                                   |
| February 2, 2005          | Dinner Meeting Topic: LEEDS                         |
| March 2, 2005             | Dinner Meeting Topic: High-End Home Design          |
| April 6, 2005             | Dinner Meeting Topic: Exempla                       |
| May 4, 2005               | Final Meeting of the Year                           |
| May 13, 2005              | 13 <sup>th</sup> Annual ASHRAE Technical Conference |
| <b>**June 27, 2005</b>    | <b><i>GOLF TOURNAMENT at Hiwan Golf Course</i></b>  |
| <b>**June 25-29, 2005</b> | <b><i>2005 ASHRAE Annual Meeting</i></b>            |

**Hope you had a Happy Holiday Season! Best Wishes for the New Year!**

Visit the new Rocky Mountain ASHRAE  
website: [www.rockymtnashrae.com](http://www.rockymtnashrae.com)



NEWSLETTER OF THE ROCKY MOUNTAIN CHAPTER  
AMERICAN SOCIETY OF HEATING, REFRIGERATING, AND AIR-CONDITIONING ENGINEERS, INC.

Volume 46, Number 6

**FEBRUARY 2005**

Editor: *Ginger Schulz*

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\*With Reservations Made Before Monday Noon

**Dinner Location:** Wynkoop Brewing Company  
1634 18th St.  
Denver, CO 80202  
(Downtown, Corner of 18<sup>th</sup> & Wynkoop)

Guests, Non-members or Without Reservation - \$30  
Students - \$20

**RSVP: Scott Martin**  
E-mail: [smartin@rmhgroup.com](mailto:smartin@rmhgroup.com)

**Time:** 5:30 Social Hour (Wynkoop)  
6:30 Dinner (Wynkoop)  
7:00 Program Begins (Wynkoop)



## February Program and Speakers



Denver Place achieved GOLD on Nov. 5 in the USGBC LEED-EB Pilot program, the first building in Colorado to earn LEED EB certification. In 1999 it was the first Denver building to earn the EPA Energy Star label. Denver Place is a 1.3 million sq. ft. downtown office and retail complex, the 3rd largest in downtown, with two towers and interconnecting "terraces". The LEED EB program promotes environmentally friendly property management strategies that demonstrate energy savings, water conservation, recycling, indoor air quality plans and other green sustainable management practices.



**Lori Carter, BA, RPA, Manager of Tenant Services, Amerimar Realty Management Company Colorado:** seven years in commercial real estate including management and leasing of medical and commercial office properties

**Curtis McNair, Chief Engineer, Amerimar Realty Management Company Colorado.** 17 years building engineering, operating, & maintenance

**Michael D. Haughey, P.E., LEED AP, Silvertip Integrated Engineering Consultants:** 30 years mechanical engineering & energy conservation, USGBC-Colorado Board of Directors,



# President's Message



Hello Members,

We had another great meeting last month. Dave Willetts from J.L. Hermon & Associates discussed evaporative cooling versus traditional air cooling especially as it applied to supermarket applications. Dave has always been a great supporter of ASHRAE and a long time member of our industry. Thanks again to Dave for his informative lecture.

February is home to National Engineers Week. An important part of the ASHRAE organization is spreading engineering knowledge to others. If you, or any other ASHRAE member talks to the public about engineering (on a specific topic or more broadly - such as to a high school class) please let us know! We want to recognize you and your efforts to encourage others to do the same.

As I have mentioned before (and will again), we have several big events coming up and they require volunteers. The first one is our annual technical conference on May 13. See Brian Lynch or myself if you would like to speak at or volunteer for this conference. The second event is the ASHRAE Annual Meeting which will be in Denver on June 25-29. As the host city for about 3,000 people from all over North America, we will need volunteers to help visitors with questions and staff a hospitality booth. See me to volunteer.

Thank you all for your help and continued support of our ASHRAE organization.

David Rodenberg  
drodenberg@long.com  
ASHRAE Rocky Mountain Chapter President





# ASHRAE ROSTER



## Rocky Mountain Roster

|                     |                 |                                                                                  |
|---------------------|-----------------|----------------------------------------------------------------------------------|
| President           | Dave Rodenberg  | <a href="mailto:drodenberg@long.com">drodenberg@long.com</a>                     |
| President Elect     | John Stumpf     | <a href="mailto:john@burchassociates.com">john@burchassociates.com</a>           |
| Vice President      | Kevin Parrot    | <a href="mailto:KevinP@trinity-mechanical.com">KevinP@trinity-mechanical.com</a> |
| Secretary           | Brian Lynch     | <a href="mailto:brian.lynch@york.com">brian.lynch@york.com</a>                   |
| Treasurer           | Scott Martin    | <a href="mailto:smartin@rmhgroup.com">smartin@rmhgroup.com</a>                   |
| Newsletter Editor   | Ginger Schulz   | <a href="mailto:gschulz@murphy-den.com">gschulz@murphy-den.com</a>               |
| Membership          | Larry Hodgins   | <a href="mailto:lhodgins@empiregas.com">lhodgins@empiregas.com</a>               |
| Refrigeration       | Dave Rodenberg  | <a href="mailto:drodenberg@long.com">drodenberg@long.com</a>                     |
| Historian           | Steve Maxson    | <a href="mailto:smaxson@sbengr.com">smaxson@sbengr.com</a>                       |
| Technology Transfer | Jeremy Hollands | <a href="mailto:jhollands@catorruma.com">jhollands@catorruma.com</a>             |
| Resource Promotions | John Stumpf     | <a href="mailto:john@burchassociates.com">john@burchassociates.com</a>           |
| Web Master          | Kyle Manske     | <a href="mailto:kmanske@comfortsystemsusa.com">kmanske@comfortsystemsusa.com</a> |
| Education Chairman  | Kevin Ainsworth | <a href="mailto:kainsworth@mcgrath-inc.com">kainsworth@mcgrath-inc.com</a>       |
| Director            | Lynda Rodenberg | <a href="mailto:Lfuller@mcgrath-inc.com">Lfuller@mcgrath-inc.com</a>             |
| Director            | Kate Allen      | <a href="mailto:kallen@caveoeng.com">kallen@caveoeng.com</a>                     |







# RESEARCH



## ASHRAE Research Donor of the Month

Get ready for your phone calls from our Research Committee in the coming months to support our 2004-2005 Research Campaign. Our Goal is to raise approximately \$34,000.00 for ASHRAE Research prior to June 30, 2005. At this point we have raised about 10%. I recognize that our biggest fundraiser is the Technical Conference, but that only accounts for about 40%. If you have any questions please don't hesitate to call or email me.

We also have a program that we do at our dinner meeting called "50/50". We raffle off a gift from an individual or company, and 50% of the monies raised go toward research and the other goes into a pot. I want to thank David Rodenberg from Long Associates, Inc. for the Gift Certificate from Tattered Cover for our raffle at the January dinner meeting. We raised an additional \$90.00 that evening, so you now have a one and four chance to win at least \$375.00 at our next meeting.

John Stumpf  
Resource Promotion





# ANNOUNCEMENTS



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Available for purchase at the February meeting for \$40 a copy.

A complete list of available product lines and services makes this directory an invaluable resource! It includes current product and contract information for representatives, distributors, wholesalers, engineers, contractors and other related businesses within the HVAC&R industry.

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## **Chapter Volunteer Activities!!!!**

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## **Let ASHRAE Train Your Employees!**

The ASHRAE Learning Institute can offer a 1-day Professional Development Seminar to any interested companies or groups. The benefits include: Continuing Education Credits (PDH and LU), the opportunity for members to attend a high quality seminar presented by a nationally recognized instructor(s) for a registration fee of \$250, the technical material will be free from commercialism and peer reviewed for technical accuracy, and 60% of the revenue earned stays with the Rocky Mountain chapter. Available topics are as follows:

- Optimizing the Design and Control of Chilled Water Plants
  - System Selection and Report
  - Determining Energy Savings from Performance Contracting Projects-Measurement and Verification
  - Economic Analysis of Engineering Projects: Life-Cycle Costing
  - Understanding and Specifying Basic BACnet Systems
  - Building Retrofit for Energy Efficiency

The local ASHRAE chapter will take care of setting up everything. A minimum of 10 attendees is required to present this seminar. Please contact David Rodenberg, [drodenberg@long.com](mailto:drodenberg@long.com) if interested.





# ANNOUNCEMENTS



## **ASHRAE Annual Meeting Announcement**

The upcoming 2005 ASHRAE Annual Meeting will be held on June 25-29 in Denver at the Adams Mark Hotel. Opportunities are available for participating on the Summer Meeting Planning Committee. This committee will coordinate with Society the planning of the event. In conjunction, the local chapter is requesting volunteers for monitoring the workshop sessions and being ambassadors for Denver activities. If you are interested in helping out please contact Dave Rodenberg, [drodenberg@long.com](mailto:drodenberg@long.com)

## **Membership Advance**

Be recognized by your peers and rewarded by ASHRAE for advancing your membership grade

Grade advancement means a Student Member becomes an Associate or Affiliate Member, or an Associate or Affiliate Member becomes a Member. There is no change in annual dues upon advancing from Associate Member to Member.

Advancement to Member criteria:

At the time of advancement, a member shall have the equivalent of twelve (12) Society-approved years of experience composed of an approved combination of the following:

1. Completed education beyond high school
2. Work experience in research, teaching, design, contracting, engineering sales and engineering management
3. Professional engineering or related registration or license issued by a legally authorized body.

The *Application for Membership Advancement* is available from the chapter's Membership Promotion Chair, or online at [www.ashrae.org](http://www.ashrae.org).

Members advancing their grade will receive a new membership card and certificate, and a \$20.00 coupon from ASHRAE redeemable for annual or winter registration fees, publications, or logo merchandise.





NAME: \_\_\_\_\_ , \_\_\_\_\_ , \_\_\_\_\_  
 (LAST) (FIRST) (MI)

STATUS: RENEWAL \_\_\_\_\_ NEW MEMBER \_\_\_\_\_ ADDRESS CHANGE \_\_\_\_\_

PLEASE CIRCLE PREFERRED MAILING ADDRESS:

HOME ADDRESS

BUSINESS ADDRESS

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

PHONE \_\_\_\_\_

PHONE \_\_\_\_\_

email \_\_\_\_\_

I WOULD LIKE TO BE CONTACTED ABOUT SERVING ON ONE OF THE FOLLOWING COMMITTEES OR FUNCTIONS (PLEASE CIRCLE).

- |                       |                                 |                     |
|-----------------------|---------------------------------|---------------------|
| A. MEMBERSHIP         | H. RESEARCH FUND PROMOTIONS     | O. NEWSLETTER       |
| B. ROSTER             | I. MONTHLY MEETING PROGRAMS     | P. SOCIAL COMMITTEE |
| C. MEETING ATTENDANCE | J. PUBLICITY                    |                     |
| D. EDUCATION          | K. LADIES NIGHT                 |                     |
| E. GOLF               | L. COLORADO ENGINEERING COUNCIL |                     |
| F. CHAPTER HISTORIAN  | M. GENERAL (COMMITTEE HELP)     |                     |
| G. TECHNICAL SEMINARS | N. ENERGY COMMITTEE             |                     |

PLEASE MAIL THIS INVOICE AND YOUR CHECK FOR \$35.00 (PAYABLE TO **ROCKY MOUNTAIN CHAPTER ASHRAE**) TO THE FOLLOWING:

LARRY HODGINS  
 EMPIRE GAS & ELECTRIC EQUIPMENT COMPANY  
 1635 W. 13<sup>TH</sup> AVENUE, DENVER CO 80204

303.886.5577

[rmc-ashrae@ljhpe.com](mailto:rmc-ashrae@ljhpe.com)

[www.rockymtnashrae.com](http://www.rockymtnashrae.com)





## FEBRUARY EMPLOYMENT LISTINGS

Position: Project Design Engineer  
Company: Design Mechanical  
Web Site: [www.comfortsystemsusa.com](http://www.comfortsystemsusa.com)  
Main Phone: 303-449-2092  
Fax: 303-449-8739  
Address: 168 CTC Blvd, Suite D  
Louisville, CO 80027

Contact: Rich Bengé  
Contact Phone: 303-661-1720  
Contact Email: [rbenge@comfortsystemsusa.com](mailto:rbenge@comfortsystemsusa.com)

### More Info:

Design Mechanical is a full service design/build mechanical contractor with in-house design services that support our construction efforts. Our main office is in Louisville with satellite offices in Eagle and Telluride Colorado. We are seeking a project design engineer to work in our Louisville engineering department. The ideal candidate would have a minimum of 3 to 5 years of experience in designing commercial HVAC and plumbing systems within a design/build environment. PE license is a plus but not a requirement. Excellent benefit package. Salary commensurate with experience. Please send resume and references to Rich Bengé at the above mailing or email address.

---

Position: Project Engineer  
Company: The Ballard Group, Inc.  
Main Phone: 303.988.4514  
Fax: 303.988.4517  
  
Address: 2525 South Wadsworth Blvd.  
Suite 200  
Lakewood, CO 80227

Contact: Steve Franz  
Contact Email: [sfranz@theballardgroup.com](mailto:sfranz@theballardgroup.com)

### More Info:

The Ballard Group is a mechanical design firm that has been in business since 1979. We design HVAC, plumbing and fire protections systems for a wide variety of installations, including hospitals, recreation centers, k-12 and higher education.





# EMPLOYMENT



We are looking for employees who are dedicated, career-minded, and have a desire to develop a full range of skills related to mechanical design. The ideal candidate will have some high quality design experience related to the types of work noted above. A wide range of experience levels will be considered, and salary will be commensurate with experience. There are opportunities both in the HVAC and plumbing sides of our business.

If you are seeking a supportive environment that has opportunity for learning and growth, and you have drive and determination, we would like to consider you for a place on our team.

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Position: Mechanical Engineer  
Company: M-E Engineers, Inc.  
Web Site: [www.me-engineers.com](http://www.me-engineers.com)  
Main Phone: 303-421-6655  
Fax: 303-421-0331  
Address: 10055 W. 43<sup>rd</sup> Ave.  
Wheat Ridge, CO 80033

Contact: Trish Lovato  
Contact Phone: 303-421-6655  
Contact Email: [tlovato@me-engineers.com](mailto:tlovato@me-engineers.com)

**More Info:**

M-E Engineers, Inc. is a national engineering firm seeking Mechanical Engineers to work on sports facilities, laboratories, health care and commercial projects. Preferred candidates should have 3+ years experience in the design of HVAC and plumbing systems. These positions require strong technical abilities, organizational skills and attitude. PE preferred. Excellent salary and benefit package. Send resumes to : M-E Engineers, Inc. Attn: Trish Lovato, 10055 W. 43<sup>rd</sup> Ave., Wheat Ridge, CO 80033 or e-mail: [tlovato@me-engineers.com](mailto:tlovato@me-engineers.com).

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Position(s): Application Engineers, Project Technicians,  
Account Manager, and Warehouse Person.  
Company: Setpoint Systems Corporation  
Web site: [www.setpointsystems.com](http://www.setpointsystems.com)  
Address: 2680 S. Platte River Drive, Denver, CO 80223

Contact: Aaron Nahale  
Contact Email: [anahale@setpointsystems.com](mailto:anahale@setpointsystems.com)

**Applications Engineers:** Setpoint Systems Corporation is an award-winning temperature controls contractor serving Colorado, Wyoming, and New Mexico since 1983. We are in search of engineers to design control systems for HVAC applications. Position requires at least three years of experience to include AutoCAD; working knowledge of DDC, electric and pneumatic control systems for commercial, industrial and institutional buildings; analytical and organizational skills.





# EMPLOYMENT



Extensive product training provided by employer. Salary commensurate with experience.

**Project Technicians:** Responsibilities include developing, assisting and maintaining the design of temperature control systems and related products for award-winning HVAC systems for commercial, industrial and institutional facilities; project planning and scheduling; project start-up; checkout, turnover, training and postmortems; and developing, generating and maintaining project documentation. Extensive product training provided by employer. Salary commensurate with experience.

**Account Manager:** Responsibilities include customer development; cost estimating of pneumatic, electric and electronic temperature control systems for commercial, industrial and institutional HVAC systems; design/build budgeting; energy conservation analysis; and negotiating contracts with mechanical contractors and end-users. Trains customers, contractors, end-users and engineering and facility managers on controls, DDC and HVAC. Qualifications include working knowledge of DDC, electric and pneumatic control systems; analytical and organizational skills. Extensive product training provided by employer. Salary commensurate with experience.

**Warehouse Person:** Responsibilities include shipping and receiving, inventory control, product inventory and tool inventory. Works closely with purchasing manager. Qualifications include good people skills, analytical and organizational skills and good driving record. Extensive product training provided by employer. Opportunity for advancement within company. Salary commensurate with experience.

**Setpoint Systems offers a complete benefits' health package, including 401(k) contribution matching and tuition reimbursement. EOE M/F/D/V.**

=====  
Position: Mechanical Engineer/Designer  
Company: Integrated Mechanical Systems  
Main Phone: 303.794.4822  
Address: 6650 South Vine Street  
Suite L10  
Centennial, Colorado 80121

Contact: Dave Olson  
Contact Phone: 303.794.4822  
Contact Email: davidolson@imshvac.com

More Info:

Established full service engineering firm seeks HVAC Engineer/Designer, 10 to 15 years experience, PE preferred. Competitive salary, simple IRA, overtime pay, health insurance, dental, sick time and paid vacation. Consider joining our casual, small, non-smoking office in Littleton. Please send resume and list of references.





# EMPLOYMENT



Position: Piping Detailer/Designer  
Company: Trautman & Shreve, Inc.  
Web Site: [www.trautman-shreve.com](http://www.trautman-shreve.com)  
Main Phone: 303-295-1414  
Fax: 303-295-0324  
Address: 4406 Race Street, Denver, CO 80216

Contact: Personnel Department  
Contact Phone: 303-295-1414

More Info:

## Qualifications:

- Minimum 5 years experience in routing, coordination, and detailing of piping for HVAC or plumbing systems for hospitals, labs, commercial office buildings, etc.
- Proficient in Auto CAD 2000 or higher.
- Minimum 1year experience working with 3D-CAD software (Quickpen 3D pipe designer strongly preferred).
- Ability to create 3D-coordinated shop drawings in a multi-discipline environment.
- Familiarity with isometric and fabrication drawings.
- Exposure to Navis Works viewing and collision check software.
- Committed to meeting short-duration schedules.
- A proven record of accomplishment and verifiable references are required.

=====

Position: Sales Engineer and Inside Sales  
Fax your resume to: 720-889-1519  
Contact: Sales Manager  
E-mail: [denverjobsa@yahoo.com](mailto:denverjobsa@yahoo.com)

More Info:

A Fortune 500 company, and a leading worldwide Manufacturer of HVAC&R equipment is currently looking for a Salesperson and an Inside Salesperson. We provided innovative products and services for a full range of projects from a single house to Large Campus'. Candidates should have extensive industry experience in HVAC sales or HVAC design. All replies are confidential.







## FIRST CLASS

Chapter may not act for Society. Expressions, opinions, and comments within this newsletter should not be taken as those of the Chapter or Society.

Rocky Mountain Chapter of ASHRAE  
c/o Ginger Schulz  
Murphy Company  
3790 Wheeling Street  
Denver, CO 80239



## ACTIVITIES CALENDAR



For membership info or change of address contact: Larry Hodgins • Empire Gas • [lhodgins@empiregas.com](mailto:lhodgins@empiregas.com)

### ASHRAE Events

January 28, 2005

DU Hockey Night!!

February 2, 2005

Dinner Meeting Topic: LEEDS

March 2, 2005

Dinner Meeting Topic: ????

April 6, 2005

Dinner Meeting Topic & Tour (?): Exempla-Good Samaritan

May 4, 2005

Dinner Meeting Topic: High-End Home Design

May 13, 2005

13<sup>th</sup> Annual ASHRAE Technical Conference

**\*\*June 27, 2005**

***GOLF TOURNAMENT at Hiwan Golf Course***

**\*\*June 25-29, 2005**

***ASHRAE National Meeting at Adams Mark Hotel***

Visit the new Rocky Mountain ASHRAE

website: [www.rockymtnashrae.com](http://www.rockymtnashrae.com)





NEWSLETTER OF THE ROCKY MOUNTAIN CHAPTER  
AMERICAN SOCIETY OF HEATING, REFRIGERATING, AND AIR-CONDITIONING ENGINEERS, INC.

Volume 46, Number 7

**MARCH 2005**

Editor: *Ginger Schulz*

Visit the new Rocky Mountain ASHRAE website: [www.rockymtnashrae.com](http://www.rockymtnashrae.com)

**Date:** March 2, 2004

**Cost:** Rocky Mtn Chapter Members-\$25\*  
\*With Reservations Made Before Monday Noon

**Dinner Location:** Wynkoop Brewing Company  
1634 18th St.  
Denver, CO 80202  
(Downtown, Corner of 18<sup>th</sup> & Wynkoop)

Guests, Non-members or Without Reservation - \$30  
Students - \$20

**Time:** 5:30 Social Hour (Wynkoop)  
6:30 Dinner (Wynkoop)  
7:00 Program Begins (Wynkoop)

**RSVP: Scott Martin**  
E-mail: [smartin@rmhgroup.com](mailto:smartin@rmhgroup.com)



## March Program and Speakers



Monitor: Dave Olson Integrated Mechanical Systems

Panel Discussion on Controls and Building Automation Systems

We asked the tallest local ASHRAE member we could find to monitor our panel discussion on controls and keep things on track and topic. Dave will over see a panel that includes representation from the engineering community, contractors, BACTalk, Johnson Controls, Long Building Environments, etc.

Join us in a discussion about the current industry, where it might be headed, common pitfalls of design, specification and application, and hopefully answer your control related questions.

See everyone at the Wynkoop.

Kevin Parrot



# President's Message



Hello Members,

Thanks to all who attended our meeting last month. Michael Haughey discussed a case study (a downtown Denver building) that involved LEED. The LEED program was developed by the U.S. Green Building Council and is an increasingly popular way to measure the energy efficiency and environmental impact of buildings. This case study was a great way to learn about LEED using specific design examples from the building (water usage, materials of construction, landscaping, recycling, etc.). Thanks to Michael and his guests for their interesting presentation.

ASHRAE is sponsoring a satellite broadcast (also a webcast) on April 13<sup>th</sup> to discuss the problem of mold in buildings. If you think this isn't a problem in Colorado think again. Any space without good ventilation is a candidate for big problems. See elsewhere in this issue for details on where you can go in town to see the broadcast.

Another reminder: We have several big events coming up and they require volunteers. The first one is our annual technical conference on May 13<sup>th</sup>. See Brian Lynch or myself if you want to speak at this conference (or if you know someone who does). The second event is the ASHRAE Annual Meeting which will be in Denver on June 25-29. As the host city for about 3,000 people from all over the world, we will need volunteers to help visitors with questions and staff a hospitality booth. See me to volunteer.

Thank you all for your help and continued support of our ASHRAE organization.

David Rodenberg  
drodenberg@long.com  
ASHRAE Rocky Mountain Chapter President





## Rocky Mountain Roster

|                     |                 |                                                                                  |
|---------------------|-----------------|----------------------------------------------------------------------------------|
| President           | Dave Rodenberg  | <a href="mailto:drodenberg@long.com">drodenberg@long.com</a>                     |
| President Elect     | John Stumpf     | <a href="mailto:john@burchassociates.com">john@burchassociates.com</a>           |
| Vice President      | Kevin Parrot    | <a href="mailto:KevinP@trinity-mechanical.com">KevinP@trinity-mechanical.com</a> |
| Secretary           | Brian Lynch     | <a href="mailto:brian.lynch@york.com">brian.lynch@york.com</a>                   |
| Treasurer           | Scott Martin    | <a href="mailto:smartin@rmhgroup.com">smartin@rmhgroup.com</a>                   |
| Newsletter Editor   | Ginger Schulz   | <a href="mailto:gschulz@murphy-den.com">gschulz@murphy-den.com</a>               |
| Membership          | Larry Hodgins   | <a href="mailto:lhodgins@empiregas.com">lhodgins@empiregas.com</a>               |
| Refrigeration       | Dave Rodenberg  | <a href="mailto:drodenberg@long.com">drodenberg@long.com</a>                     |
| Historian           | Steve Maxson    | <a href="mailto:smaxson@sbengr.com">smaxson@sbengr.com</a>                       |
| Technology Transfer | Jeremy Hollands | <a href="mailto:jhollands@catorruma.com">jhollands@catorruma.com</a>             |
| Resource Promotions | John Stumpf     | <a href="mailto:john@burchassociates.com">john@burchassociates.com</a>           |
| Web Master          | Kyle Manske     | <a href="mailto:kmanske@comfortsystemsusa.com">kmanske@comfortsystemsusa.com</a> |
| Education Chairman  | Kevin Ainsworth | <a href="mailto:kainsworth@mcgrath-inc.com">kainsworth@mcgrath-inc.com</a>       |
| Director            | Lynda Rodenberg | <a href="mailto:Lfuller@mcgrath-inc.com">Lfuller@mcgrath-inc.com</a>             |
| Director            | Kate Allen      | <a href="mailto:kallen@caveoeng.com">kallen@caveoeng.com</a>                     |



# RESEARCH



## ASHRAE Research Donor of the Month

Get ready for your phone calls from our Research Committee in the coming months to support our 2004-2005 Research Campaign! Our Goal is to raise approximately \$34,000.00 for ASHRAE Research prior to June 30, 2005. At this point we have raised about 10%. I recognize that our biggest fundraiser is the Technical Conference, but that only accounts for about 40%. If you have any questions please don't hesitate to call or email me.

We also have another program that we do at our dinner meeting called 50/50. We raffle off a gift from an individual or company and 50% goes toward research and the other goes into a pot. I want to thank Brian Lynch from York International for the Gift Certificate from Home Depot for our raffle at the January dinner meeting. We raised an additional \$120.00 of which \$60.00 will go to ASHRAE and \$60.00 will go in the pot, so you now have a one and three chance to win at least \$425.00 at our next meeting.

I look forward to seeing everyone who can participate in our first annual bowling event coming Friday March 18<sup>th</sup> at Fat City in Littleton from 4-7pm. Please see sign-up sheet and let me know if you have any questions.

John Stumpf  
Research Promotion Chair



Thanks to everyone who came to the Denver University Hockey Night! We all had a great time watching the Pioneers defeat the University of Alaska SeaWolves! Hope to see everyone at Bowling Night!



# RESEARCH PROMO



## ASHRAE Research 1<sup>st</sup> Annual Bowling Night

That's right you heard it here first, it is time for another Research promotional event and we decided that bowling is great for the whole family. Our event will be held at Fat City in Littleton at the corner of Coal Mine and Kipling Friday March 18 from 4:00 to 7:00 P.M. The cost for this event will be \$18.00 for adults and \$15.00 for children 13 and under. So please come and join us for a fun filled night of bowling.

Name: \_\_\_\_\_

Address: \_\_\_\_\_

Tickets: Adults \_\_\_\_\_ X \$18 = \_\_\_\_\_

Children \_\_\_\_\_ X \$15 = \_\_\_\_\_

Total = \_\_\_\_\_

Please make checks payable to Rocky Mountain Chapter ASHRAE

And send to:

John Stumpf

Burch Associates, Inc.

7285 S. Revere Pkwy Ste 701

Centennial, CO. 80112

Ph: (303) 649-1577 Fax: (303) 649-1417





# ANNOUNCEMENTS



## **Student-In-Industry Day!**

April (Wednesday April 6<sup>th</sup>) is Student Night and in conjunction with that we will also offer Student-In-Industry Day. Students from local universities will have the opportunity to spend the afternoon with a Rocky Mountain Chapter member at their company learning and hopefully asking questions about Consulting Engineering, Sales, Contracting and Facility Engineering. The education committee will be asking for volunteers and sponsors to assist the students on April 6<sup>th</sup>.

## **ASHRAE/SMACNA Colorado 2005 HVAC&R Mechanical Equipment & Product Directory**

Available for purchase at the March meeting for \$40 a copy.

A complete list of available product lines and services makes this directory an invaluable resource! It includes current product and contract information for representatives, distributors, wholesalers, engineers, contractors and other related businesses within the HVAC&R industry.

Look for it at the monthly ASHRAE meeting or contact Kate Allen, Caveo Consulting Engineers at 720-200-5955 or [kallen@caveoeng.com](mailto:kallen@caveoeng.com).

## **Let ASHRAE Train Your Employees!**

The ASHRAE Learning Institute can offer a 1-day Professional Development Seminar to any interested companies or groups. The benefits include: Continuing Education Credits (PDH and LU), the opportunity for members to attend a high quality seminar presented by a nationally recognized instructor(s) for a registration fee of \$250, the technical material will be free from commercialism and peer reviewed for technical accuracy, and 60% of the revenue earned stays with the Rocky Mountain chapter. Available topics are as follows:

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  - System Selection and Report
  - Determining Energy Savings from Performance Contracting Projects-Measurement and Verification
  - Economic Analysis of Engineering Projects: Life-Cycle Costing
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  - Building Retrofit for Energy Efficiency

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# ANNOUNCEMENTS



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## SATELLITE BROADCAST/WEBCAST: MOLD IN OUR BUILDING ENVIRONMENT

**Wednesday, April 13, 2005**

**1:00 p.m. 4:00 p.m. Eastern Standard Time**

Concerns about mold in the building environment are no longer limited to just humid environments or North America. Mold is now a global concern for designers, contractors, building owners/operators and building occupants. Information on how to properly control moisture and humidity conditions in order to minimize mold will be presented in this broadcast/webcast sponsored by ASHRAE's Chapter Technology Transfer Committee (CTTC).

**About the Presenters:** Presenters will explore prevention of mold in new construction, methods for monitoring mold in indoor environments, detection of biological contaminants, solutions to prevent and/or alleviate mold problems and the legal issues relating to mold contamination.

**PDH Credits:** Earn 2 PDHs or 2 AIA Learning Units for viewing the Broadcast at a Site or the Webcast from your office.

**See next month's newsletter for more information concerning location of viewing sites.**

## Earn CEUs with seminars presented by Experts

Earn your CEUs with seminars led by experts from the ASHRAE Learning Institute. During the Spring 2005 Professional Development Seminar Series, you can attend seminars On-Site in Seattle and Philadelphia and Online from your computer. Enrollment is limited, so register now to reserve your space.

### **On-Site Seminars**

#### **Design and Specification of Direct Digital Control Systems**

Seattle, Washington

March 22-23, 2005

Instructors: Jim Coogan, P.E and Dave Kahn, P.E.

#### **Air System Design and Retrofit**

Philadelphia, Pennsylvania

March 29-30, 2005

Instructors: William P. Bahnfleth, Ph.D., P.E. and Stanley A. Mumma, Ph.D., P.E.







# ANNOUNCEMENTS



## Online Seminars

### **System Selection and Report**

April 5-6, 2005

1 to 4 p.m. (EDT) each day

Instructor: David M. Elovitz, P.E.

### **Optimizing the Design and Control of Chilled Water Plants**

April 12-13, 2005

1 to 4 p.m. (EDT) each day

Instructor: Mark Hydeman, P.E.

With each seminar, the ASHRAE Learning Institute provides its authoritative and credible technical resources via seminar materials, with all content developed through the Learning Institute's peer-reviewed procedures.

By completing a seminar, you'll receive a certificate of attendance and earn the appropriate number of Continuing Education Units (CEUs) or Professional Development Hours (PDHs) for engineers or AIA Learning Units (LUs) for architects.

Contact the ASHRAE Learning Institute for more information at [edu@ashrae.org](mailto:edu@ashrae.org) or 404-636-8400

## **TEGA Announcement: Technology Awards**

Each year the Society reviews applications for Technology Awards in seven categories: Commercial Buildings; Institutional Buildings; Health Care Facilities; Industrial Facilities or Processes; Public Assembly; Residential and Alternative or Renewable Energy Use. All categories carry awards for both new and existing buildings in first, second and third place. Many awards are available and the Society encourages ASHRAE members to submit any project they have been involved in which demonstrates technological achievements. These awards recognize ASHRAE members who design innovative systems, and communicate the designs to other members as well as building and facility owners.

To apply for an award, fill out the Chapter Technology Award Application (Short Form), available at the monthly meeting or contact TEGA chair Jeremy Hollands at [jhollands@catorruma.com](mailto:jhollands@catorruma.com) for an application. The awards focus on five criteria: Energy Efficiency; Indoor Air Quality; Innovation; Operation and Maintenance; Cost Effectiveness and Environmental Impact. Not all scoring topics must apply to the project to be considered for an award. Winners in each category will be submitted to the Regional TEGA Chair and can be considered for International awards, or the Engineering Award of Excellence. All applications are due by April 22, 2005.





# ANNOUNCEMENTS



## *“Avoid HVAC Bad Luck”* *attend*

The 2005 ASHRAE Technical Conference

On

**FRIDAY THE 13<sup>TH</sup>**

of May

**At the Sheraton Denver West Hotel  
360 Union Blvd. in Lakewood**

Featuring:

● 4 Seminar Tracks

● Featured presentations on: HVAC Fundamentals, Advanced Topics, Building Automation, Energy Efficient Design and Energy Retrofit Case Studies, ASHRAE Standards, Building Codes

● Half-day and full-day passes available

● Company passes may be shared by more than one person

● PDH Credits available (slight additional cost for certificate)

Who should attend?

*Architects, Engineers, Sales People, Contractors, Building Owners, Managers, Operators, and Students*

Denver Location: Sheraton Denver West Hotel

**360 Union Blvd, Lakewood, CO 80228**

***Time: 7:30 AM to 4:30 PM***

Cost: \$110.00 full day, \$60.00 half day (lunch not included) if received by April 18, 2003

\$125.00 full day, \$65.00 half day (lunch not included) if received April 19, 2003 or later

Individual or company registrations available

10% Discount available for five or more passes for one company

Net proceeds to benefit **ASHRAE Scholarship and Research**

For additional information, contact: Brian Lynch at [brian.lynch@york.com](mailto:brian.lynch@york.com) or Fax: 720.889-1519

Program, Seminars, and Speakers subject to change



# Green Building Certificate Program

## CSU's Institute for the Built Environment (IBE)

is pleased to announce its

### Green Building Certificate Program

a 12-week professional program

Thursdays, March 24-June 9, 5:30-9:00 pm

CSU Campus, Fort Collins

This Green Building Certificate provides a comprehensive overview of this fast-growing, ever dynamic field. Approximately 20% of the course addresses residential topics, 40% commercial/institutional, and the remainder applies to all aspects of the built environment. Coursework focuses on the following topics in green building:

- o Sustainable site development
  - o Environmentally smart building and finish materials
  - o Energy efficiency and renewable energy systems
  - o Water use and conservation
  - o Daylighting and natural ventilation
  - o Integrated building and energy systems
  - o Indoor environmental quality
  - o Deconstruction, recycling, and construction waste
  - o Building commissioning
  - o Economics of green building and life cycle costing
  - o LEED® Rating System
  - o LEED® Professional Accreditation exam

*Over 80% of our students have successfully passed the LEED® (Leadership in Energy and Environmental Design) Professional Accreditation exam within a month of completing this Certificate Program.*

#### **Tuition: \$1595**

Includes two required texts, a framed *Certificate of Program Completion*, and graduate reception.

#### **Early Bird Tuition: \$1495**

If registration is postmarked no later than March 10

#### **Continuing Education Credit \$50**

Additional fee for documentation of 4.2 CEUs

Visit [www.ibe.colostate.edu](http://www.ibe.colostate.edu) for registration information.

To request a brochure, email: [gmkimmel@cahs.colostate.edu](mailto:gmkimmel@cahs.colostate.edu)





## MARCH EMPLOYMENT LISTINGS

Position: Temperature control sales  
Fax: 303-287-4809

Contact Phone: 303-480-5864  
Contact Email: [controls2005@yahoo.com](mailto:controls2005@yahoo.com)

### More Info:

Company has been providing Temperature Control Systems in the Colorado marketplace for 25 years. We have been one of the top producers for the controls manufacturer we represent in Colorado for many years running.

Experience estimating all types of Temperature Control Systems. Electrical estimating also a benefit.

Position: HVAC/Plumbing Designer  
Company: The CE Group  
Main Phone: (970) 266-9888  
Fax: (970) 266-8876  
Address: 400 Remington Street  
Fort Collins, CO 80524

Contact: Nancy D'Rosario  
Contact Phone: (970) 266-9888  
Contact Email: [NancyD@theCEgroup.com](mailto:NancyD@theCEgroup.com)

### More Info:

The CE Group is a small Consulting Engineering Firm that has been in business since 1998 specializing in HVAC and Plumbing Design for Commercial, Industrial and Institutional Projects. We are a progressive company with current projects in Colorado, Nevada, Arizona, Wyoming and Nebraska. We offer a competitive salary, performance bonus, benefits and 401K plan.

We are looking for an experienced designer who is dedicated, self-motivated, career-minded, and has a full range of skills related to mechanical design including proficiency in AutoCAD 2000 or higher and load analysis software. Experience with Autodesk Building Systems and Carrier HAP 4.2 a plus. The ideal candidate will have design experience related to the types of work noted above and be able to work well with sub-consultants and clients.

If you are seeking a supportive environment that has opportunity for learning and growth, we would like to consider you for a place on our team. Consider joining our casual, small office in Ft. Collins. Please e-mail resume to: [NancyD@theCEgroup.com](mailto:NancyD@theCEgroup.com)





# EMPLOYMENT



Position: Project Design Engineer  
Company: Design Mechanical  
Web Site: [www.comfortsystemsusa.com](http://www.comfortsystemsusa.com)  
Main Phone: 303-449-2092  
Fax: 303-449-8739  
Address: 168 CTC Blvd, Suite D  
Louisville, CO 80027

Contact: Rich Bengé  
Contact Phone: 303-661-1720  
Contact Email: [rbenge@comfortsystemsusa.com](mailto:rbenge@comfortsystemsusa.com)

## More Info:

Design Mechanical is a full service design/build mechanical contractor with in-house design services that support our construction efforts. Our main office is in Louisville with satellite offices in Eagle and Telluride Colorado. We are seeking a project design engineer to work in our Louisville engineering department. The ideal candidate would have a minimum of 3 to 5 years of experience in designing commercial HVAC and plumbing systems within a design/build environment. PE license is a plus but not a requirement. Excellent benefit package. Salary commensurate with experience. Please send resume and references to Rich Bengé at the above mailing or email address.

Position: Project Engineer  
Company: The Ballard Group, Inc.  
Main Phone: 303.988.4514  
Fax: 303.988.4517  
Address: 2525 South Wadsworth Blvd.  
Suite 200  
Lakewood, CO 80227

Contact: Steve Franz  
Contact Email: [sfranz@theballardgroup.com](mailto:sfranz@theballardgroup.com)

## More Info:

The Ballard Group is a mechanical design firm that has been in business since 1979. We design HVAC, plumbing and fire protections systems for a wide variety of installations, including hospitals, recreation centers, k-12 and higher education.

We are looking for employees who are dedicated, career-minded, and have a desire to develop a full range of skills related to mechanical design. The ideal candidate will have some high quality design experience related to the types of work noted above. A wide range of experience levels will be considered, and salary will be commensurate with experience. There are opportunities both in the HVAC and plumbing sides of our business.

If you are seeking a supportive environment that has opportunity for learning and growth, and you have drive and determination, we would like to consider you for a place on our team.





# EMPLOYMENT



Position: Mechanical Engineer  
Company: M-E Engineers, Inc.  
Web Site: [www.me-engineers.com](http://www.me-engineers.com)  
Main Phone: 303-421-6655  
Fax: 303-421-0331  
Address: 10055 W. 43<sup>rd</sup> Ave.  
Wheat Ridge, CO 80033

Contact: Trish Lovato  
Contact Phone: 303-421-6655  
Contact Email: [tlovato@me-engineers.com](mailto:tlovato@me-engineers.com)

## More Info:

M-E Engineers, Inc. is a national engineering firm seeking Mechanical Engineers to work on sports facilities, laboratories, health care and commercial projects. Preferred candidates should have 3+ years experience in the design of HVAC and plumbing systems. These positions require strong technical abilities, organizational skills and attitude. PE preferred. Excellent salary and benefit package. Send resumes to : M-E Engineers, Inc. Attn: Trish Lovato, 10055 W. 43<sup>rd</sup> Ave., Wheat Ridge, CO 80033 or e-mail: [tlovato@me-engineers.com](mailto:tlovato@me-engineers.com).

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Position(s): Sales Engineer and Inside Sales Engineer  
Fax: 720-889-1519  
Contact: Sales: Manager  
Contact Email: [denverjobsa@yahoo.com](mailto:denverjobsa@yahoo.com)

## More Info:

A Fortune 500 company, and a leading worldwide Manufacturer of HVAC&R equipment is currently looking for a Salesperson and an Inside Salesperson. We provide innovative products and services for a full range of projects from a single house to Large Campus'. Candidates should have extensive industry experience in HVAC sales or HVAC design. All replies are confidential.





# EMPLOYMENT



Position: Piping Detailer/Designer  
Company: Trautman & Shreve, Inc.  
Web Site: [www.trautman-shreve.com](http://www.trautman-shreve.com)  
Main Phone: 303-295-1414  
Fax: 303-295-0324  
Address: 4406 Race Street, Denver, CO 80216

Contact: Personnel Department  
Contact Phone: 303-295-1414

More Info:

## Qualifications:

- Minimum 5 years experience in routing, coordination, and detailing of piping for HVAC or plumbing systems for hospitals, labs, commercial office buildings, etc.
- Proficient in Auto CAD 2000 or higher.
- Minimum 1year experience working with 3D-CAD software (Quickpen 3D pipe designer strongly preferred).
- Ability to create 3D-coordinated shop drawings in a multi-discipline environment.
- Familiarity with isometric and fabrication drawings.
- Exposure to Navis Works viewing and collision check software.
- Committed to meeting short-duration schedules.
- A proven record of accomplishment and verifiable references are required.

Please fax resumes to the number listed above.





NAME: \_\_\_\_\_ , \_\_\_\_\_ , \_\_\_\_\_  
 (LAST) (FIRST) (MI)

STATUS: RENEWAL \_\_\_\_\_ NEW MEMBER \_\_\_\_\_ ADDRESS CHANGE \_\_\_\_\_

PLEASE CIRCLE PREFERRED MAILING ADDRESS:

HOME ADDRESS

BUSINESS ADDRESS

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

PHONE \_\_\_\_\_

PHONE \_\_\_\_\_

email \_\_\_\_\_

I WOULD LIKE TO BE CONTACTED ABOUT SERVING ON ONE OF THE FOLLOWING COMMITTEES OR FUNCTIONS (PLEASE CIRCLE).

- |                       |                                 |                     |
|-----------------------|---------------------------------|---------------------|
| A. MEMBERSHIP         | H. RESEARCH FUND PROMOTIONS     | O. NEWSLETTER       |
| B. ROSTER             | I. MONTHLY MEETING PROGRAMS     | P. SOCIAL COMMITTEE |
| C. MEETING ATTENDANCE | J. PUBLICITY                    |                     |
| D. EDUCATION          | K. LADIES NIGHT                 |                     |
| E. GOLF               | L. COLORADO ENGINEERING COUNCIL |                     |
| F. CHAPTER HISTORIAN  | M. GENERAL (COMMITTEE HELP)     |                     |
| G. TECHNICAL SEMINARS | N. ENERGY COMMITTEE             |                     |

PLEASE MAIL THIS INVOICE AND YOUR CHECK FOR \$35.00 (PAYABLE TO **ROCKY MOUNTAIN CHAPTER ASHRAE**) TO THE FOLLOWING:

LARRY HODGINS  
 EMPIRE GAS & ELECTRIC EQUIPMENT COMPANY  
 1635 W. 13<sup>TH</sup> AVENUE, DENVER CO 80204

303.886.5577

[rnc-ashrae@ljhpe.com](mailto:rnc-ashrae@ljhpe.com)

[www.rockymtnashrae.com](http://www.rockymtnashrae.com)





## FIRST CLASS

Chapter may not act for Society. Expressions,  
opinions, and comments within this newsletter should  
not be taken as those of the Chapter or Society.

Rocky Mountain Chapter of ASHRAE  
c/o Ginger Schulz  
Murphy Company  
3790 Wheeling Street  
Denver, CO 80239



# ACTIVITIES CALENDAR



For membership info or change of address contact: Larry Hodgins • Empire Gas • [lhodgins@empiregas.com](mailto:lhodgins@empiregas.com)

### ASHRAE Events

March 2, 2005

Dinner Meeting Topic: Panel Discussion-Controls  
And Building Automation Systems

March 18, 2005

Research Promotion Event: Bowling Night!!

April 6, 2005 *Student Night*

Dinner Meeting Topic & Tour (4:30pm): Exempla-Good Samaritan

May 4, 2005

Dinner Meeting Topic: High-End Home Design

May 13, 2005

13<sup>th</sup> Annual ASHRAE Technical Conference

**\*\*June 25-29, 2005**

***ASHRAE National Meeting at Adams Mark Hotel***

**\*\*August 22, 2005**

***GOLF TOURNAMENT at Hiwan Golf Course***

Visit the new Rocky Mountain ASHRAE

website: [www.rockymtnashrae.com](http://www.rockymtnashrae.com)





NEWSLETTER OF THE ROCKY MOUNTAIN CHAPTER  
AMERICAN SOCIETY OF HEATING, REFRIGERATING, AND AIR-CONDITIONING ENGINEERS, INC.

Volume 46, Number 8

**APRIL 2005**

Editor: *Ginger Schulz*

Visit the new Rocky Mountain ASHRAE website: [www.rockymtnashrae.com](http://www.rockymtnashrae.com)

**Date:** April 6, 2004

**Cost:** Rocky Mtn Chapter Members-\$25\*  
\*With Reservations Made Before Monday Noon

**Dinner Location:** Dave and Busters  
10667 Westminster Blvd  
Denver, CO 80202  
(104<sup>th</sup> & Hwy 36/Church Ranch Rd)

Guests, Non-members or Without Reservation - \$30  
Students - \$20

**Time:** 4:30 Tour (Exempla Good Samaritan Hospital)  
5:30 Social Hour (Dave and Buster's)  
6:30 Dinner (Dave and Buster's)  
7:00 Program (Dave and Buster's)

**RSVP:** **Scott Martin**  
**E-mail:** [smartin@rmhgroup.com](mailto:smartin@rmhgroup.com)



## April Program and Speakers



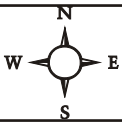
### **Student Night and Tour Exempla Good Samaritan Hospital**

Our April program will begin with a tour of the Exempla Good Samaritan Hospital. The Tour will start in at the Central Plant and then progress through the hospital to the main air handler room. Along the way we are going to try and visit one of the operating suites.

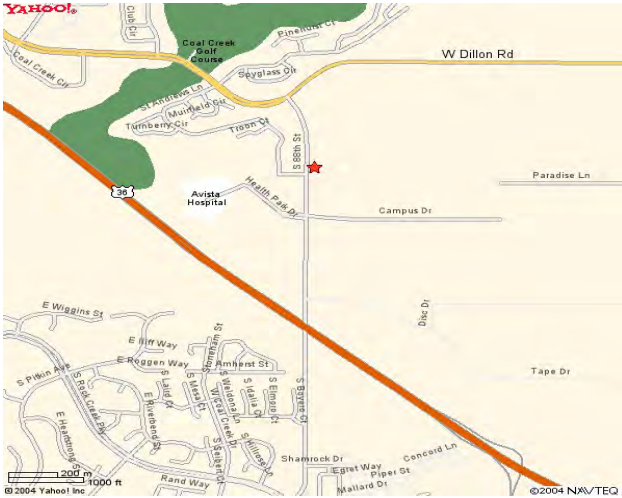
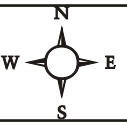
Our Dinner meeting will immediately follow at Dave and Buster's located at the Promenade at 104<sup>th</sup> and Hwy 36. Mark Jelinske with Cator Ruma will be our speaker after dinner and will discuss the medical system design and project management process and constraints.

Directions have been included in the newsletter for the Good Samaritan Hospital and Dave and Buster's

Kevin Parrot



# DIRECTIONS



From Denver:

Take 1-25 North to Hwy 36 toward Boulder.

From Hwy 36 Exit Wadsworth (Hwy 287) in Broomfield and turn North (right)

The Good Samaritan will be about 5 miles up on your right north of the E-470 Interchange (not shown).

Dave and Buster's:

From Exempla - Head south on Hwy 287 to Hwy 36.

Head south/east on Hwy 36 (left) to the 104<sup>th</sup>/Church Ranch Road exit.

Turn Left on 104<sup>th</sup> - North.

At the first light turn left on Westminster Blvd.

Turn left at the second light into the Promenade.

Dave and Buster's will be on your left.



## ASHRAE ROSTER



### Rocky Mountain Roster

President

President Elect

Vice President

Secretary

Treasurer

Membership

Refrigeration

Historian

Technology Transfer

Resource Promotions

Web Master

Education Chairman

Director

Director

Dave Rodenberg

John Stumpf

Kevin Parrot

Brian Lynch

Ginger Schulz

Larry Hodgins

Dave Rodenberg

Steve Maxson

Jeremy Hollands

John Stumpf

Kyle Manske

Kevin Ainsworth

Lynda Rodenberg

Kate Allen

[drodenberg@long.com](mailto:drodenberg@long.com)

[john@burchassociates.com](mailto:john@burchassociates.com)

[KevinP@trinity-mechanical.com](mailto:KevinP@trinity-mechanical.com)

[brian.lynch@york.com](mailto:brian.lynch@york.com)

[gschulz@murphy-den.com](mailto:gschulz@murphy-den.com)

[lhodgins@empiregas.com](mailto:lhodgins@empiregas.com)

[drodenberg@long.com](mailto:drodenberg@long.com)

[smaxson@sbengr.com](mailto:smaxson@sbengr.com)

[jhollands@catorruma.com](mailto:jhollands@catorruma.com)

[john@burchassociates.com](mailto:john@burchassociates.com)

[kmanske@comfortsystemsusa.com](mailto:kmanske@comfortsystemsusa.com)

[kainsworth@mcgrath-inc.com](mailto:kainsworth@mcgrath-inc.com)

[Lfuller@mcgrath-inc.com](mailto:Lfuller@mcgrath-inc.com)

[kallen@caveoeng.com](mailto:kallen@caveoeng.com)





# President's Message



Hello Members,

Thanks to all who attended our meeting last month. We had an excellent discussion regarding controls, interoperability, protocols, and design of control systems. Everyone in the crowd got involved and it seems everyone has pretty strong feelings about integrating controls and equipment. Thanks to all the panel members who took every stone that was thrown their way from the audience.

Another reminder: ASHRAE is sponsoring a satellite broadcast (also a webcast) on April 13<sup>th</sup> to discuss the problem of mold in buildings. This is a great learning opportunity at no cost to you. See elsewhere in this issue for details on where you can go in town to see the broadcast.

We all had a fun time at our recent bowling night and social event. We took time out on a Friday evening and drank beers, bowled some games and didn't sing any karaoke. Thanks to all who participated. If you have any ideas for our next social event, please let me know.

This month is student night at our monthly meeting. Please introduce yourself to the students in attendance and help encourage them to be part of our industry. If you're ever going to retire, you're going to need someone to take over right?

Thank you all for your help and continued support of our ASHRAE organization.

David Rodenberg  
drodenberg@long.com  
ASHRAE Rocky Mountain Chapter President





# RESEARCH



## ASHRAE Research Donor of the Month

We are coming down to the last two months to support our 2004-2005 Research Campaign. Our Goal is to raise approximately \$34,000.00 for ASHRAE Research prior to June 30, 2005. At this point we have raised about 18%. The members of our committee will be contacting you via the calling campaign and I encourage you to take their calls and support ASHRAE. I recognize that our biggest fundraiser is the Technical Conference, but that only accounts for about 40%. If you have any questions please don't hesitate to call or email me. We also have another program that we do at our dinner meeting called 50/50. We raffle off a gift from an individual or company and 50% goes toward research and the other goes into a pot. I want to thank Kate Allen of Caveo Engineering for working on and donating the product directories for our raffle at the March dinner meeting. We raised an additional \$110.00 of which \$55.00 will go to ASHRAE and \$55.00 will go in the pot, so you now have a one and two chance to win at least \$125.00 at our next meeting. I would like to say congratulations to Ross Lindgren from Blender Products who was our big winner. Ross won the pot that had over \$400.00. Ross you can expect a call from me in regards to Research!

John Stumpf  
Resource Promotions





# TECH CONFERENCE ANNOUNCEMENTS



## **“Avoid HVAC Bad Luck”**

*attend*

### **The 2005 ASHRAE Technical Conference**

On

**FRIDAY THE 13<sup>TH</sup>**

of May

At the Sheraton Denver West Hotel  
360 Union Blvd. in Lakewood

#### **Featuring:**

#### **●4 Seminar Tracks**

#### **●Featured presentations on:**

- HVAC Fundamentals: Load estimating, fan systems, Psychrometrics, piping and hydronics, and pump systems
- Advanced Topics: Smoke Management, Design Criteria for Hot Water systems, Air-Cooled vs. Water-Cooled Chillers, Advanced Steam Systems, and Maximizing Energy Performance with Ground Source Heat Pumps.
- Building Automation Systems: Introduction to BAS Technology, HVAC Controls Design, Energy Efficient Control Strategies, BAS Trends, Commissioning of BAS's, and The State of Interoperability.
- Energy Efficient and Environment: Energy Standards, LEED design, Energy Star Program, ASHRAE Standards

●Half-day and full-day passes available

●Company passes may be shared by more than one person

●PDH Credits available (slight additional cost for certificate)

#### **Who should attend?**

Architects, Engineers, Sales People, Contractors, Building Owners, Managers, Operators, and Students

Denver Location: Sheraton Denver West Hotel  
360 Union Blvd, Lakewood, CO 80228

Time: 7:30 AM to 4:30 PM

Cost: \$110.00 full day, \$60.00 half day (lunch not included) if received by April 18, 2005  
\$125.00 full day, \$65.00 half day (lunch not included) if received  
by April 19, 2005 or later

Individual or company registrations available

10% Discount available for five or more passes for one company

Net proceeds to benefit **ASHRAE Scholarship and Research**

For additional information, contact: Brian Lynch at [brian.lynch@york.com](mailto:brian.lynch@york.com) or Fax: (720) 889-1519.

Program, Seminars, and Speakers subject to change





# ANNOUNCEMENTS



## Student-In-Industry Day!

April 6<sup>th</sup> is Student in Industry Day and Student Night. Students spend the afternoon in the offices of Consultants, Sales Engineers, Facility Managers and Contractors finding out what the HVAC&R Industry is all about. We will then host the Students at the Tour and Dinner Meeting. Sponsors are needed. Please contact Kevin Ainsworth at 303-969-0220 or [kainsworth@mcgrath-inc.com](mailto:kainsworth@mcgrath-inc.com).

## ASHRAE/SMACNA Colorado 2005 HVAC&R Mechanical Equipment & Product Directory

Available for purchase at the April meeting for only \$40 a copy!

A complete list of available product lines and services makes this directory an invaluable resource! It includes current product and contract information for representatives, distributors, wholesalers, engineers, contractors and other related businesses within the HVAC&R industry.

Look for it at the monthly ASHRAE meeting or contact Kate Allen, Caveo Consulting Engineers at 720-200-5955 or [kallen@caveoeng.com](mailto:kallen@caveoeng.com).

## Let ASHRAE Train Your Employees!

The ASHRAE Learning Institute can offer a 1-day Professional Development Seminar to any interested companies or groups. The benefits include: Continuing Education Credits (PDH and LU), the opportunity for members to attend a high quality seminar presented by a nationally recognized instructor(s) for a registration fee of \$250, the technical material will be free from commercialism and peer reviewed for technical accuracy, and 60% of the revenue earned stays with the Rocky Mountain chapter. Available topics are as follows:

- Optimizing the Design and Control of Chilled Water Plants
  - System Selection and Report
  - Determining Energy Savings from Performance Contracting Projects-Measurement and Verification
  - Economic Analysis of Engineering Projects: Life-Cycle Costing
  - Understanding and Specifying Basic BACnet Systems
  - Building Retrofit for Energy Efficiency

The local ASHRAE chapter will take care of setting up everything. A minimum of 10 attendees is required to present this seminar. Please contact David Rodenberg, [drodenberg@long.com](mailto:drodenberg@long.com) if interested.

## ASHRAE Annual Meeting Announcement

The upcoming 2005 ASHRAE Annual Meeting will be held on June 25-29 in Denver at the Adams Mark Hotel. Opportunities are available for participating on the Summer Meeting Planning Committee. This committee will coordinate with Society the planning of the event. In conjunction, the local chapter is requesting volunteers for monitoring the workshop sessions and being ambassadors for Denver activities. If you are interested in helping out please contact Dave Rodenberg, [drodenberg@long.com](mailto:drodenberg@long.com)

## SATELLITE BROADCAST/WEBCAST: MOLD IN OUR BUILDING ENVIRONMENT

**Wednesday, April 13, 2005**

**1:00 p.m. 4:00 p.m. Eastern Standard Time**

Concerns about mold in the building environment are no longer limited to just humid environments or North America. Mold is now a global concern for designers, contractors, building owners/operators and building occupants. Information on how to properly control moisture and humidity conditions in order to minimize mold will be presented in this broadcast/webcast sponsored by ASHRAE's Chapter Technology Transfer Committee (CTTC).

**About the Presenters:** Presenters will explore prevention of mold in new construction, methods for monitoring mold in indoor environments, detection of biological contaminants, solutions to prevent and/or alleviate mold problems and the legal issues relating to mold contamination.







# ANNOUNCEMENTS



**PDH Credits:** Earn 2 PDHs or 2 AIA Learning Units for viewing the Broadcast at a Site or the Webcast from your office.

See next month's newsletter for more information concerning location of viewing sites.

## Earn CEUs with seminars presented by Experts

Earn your CEUs with seminars led by experts from the ASHRAE Learning Institute. During the Spring 2005 Professional Development Seminar Series, you can attend seminars On-Site in Seattle and Philadelphia and Online from your computer. Enrollment is limited, so register now to reserve your space.

### **On-Site Seminars**

#### **Design and Specification of Direct Digital Control Systems**

Seattle, Washington

March 22-23, 2005

Instructors: Jim Coogan, P.E and Dave Kahn, P.E.

#### **Air System Design and Retrofit**

Philadelphia, Pennsylvania

March 29-30, 2005

Instructors: William P. Bahnfleth, Ph.D., P.E. and Stanley A. Mumma, Ph.D., P.E.

### **Online Seminars**

#### **System Selection and Report**

April 5-6, 2005

1 to 4 p.m. (EDT) each day

Instructor: David M. Elovitz, P.E.

#### **Optimizing the Design and Control of Chilled Water Plants**

April 12-13, 2005

1 to 4 p.m. (EDT) each day

Instructor: Mark Hydeman, P.E.

With each seminar, the ASHRAE Learning Institute provides its authoritative and credible technical resources via seminar materials, with all content developed through the Learning Institute's peer-reviewed procedures.

By completing a seminar, you'll receive a certificate of attendance and earn the appropriate number of Continuing Education Units (CEUs) or Professional Development Hours (PDHs) for engineers or AIA Learning Units (LUs) for architects.

Contact the ASHRAE Learning Institute for more information at [edu@ashrae.org](mailto:edu@ashrae.org) or 404-636-8400

## **TEGA Announcement: Technology Awards**

Each year the Society reviews applications for Technology Awards in seven categories: Commercial Buildings; Institutional Buildings; Health Care Facilities; Industrial Facilities or Processes; Public Assembly; Residential and Alternative or Renewable Energy Use. All categories carry awards for both new and existing buildings in first, second and third place. Many awards are available and the Society encourages ASHRAE members to submit any project they have been involved in which demonstrates technological achievements. These awards recognize ASHRAE members who design innovative systems, and communicate the designs to other members as well as building and facility owners.

To apply for an award, fill out the Chapter Technology Award Application (Short Form), available at the monthly meeting or contact TEGA chair Jeremy Hollands at [jhollands@catorruma.com](mailto:jhollands@catorruma.com) for an application. The awards focus on five criteria: Energy Efficiency; Indoor Air Quality; Innovation; Operation and Maintenance; Cost Effectiveness and Environmental Impact. Not all scoring topics must apply to the project to be considered for an award. Winners in each category will be submitted to the Regional TEGA Chair and can be considered for International awards, or the Engineering Award of Excellence. All applications are due by April 22, 2005.







# ANNOUNCEMENTS



## SMACNA Colorado Rocky Mountain ASHRAE Joint Meeting



**Date:** Friday, April 15, 2005

**Place:** Pepsi Center, Qwest Business Center  
Club Level, Continental Divide East

**Time:** 5:00 p.m. Reception (Joint SMACNA/ASHRAE)  
7:00 p.m. **Denver Nuggets vs. Memphis Grizzly's**  
(Fantastic Seats! Sections 110, 116, 132, 140)

**Cost:** \$90 (Includes food and beverages!!!)



Return your reservation and payment to:  
**SMACNA Colorado**  
1114 W. 7<sup>th</sup> Avenue, Suite, 220  
Denver, CO 80204-4432  
(303) 832-5116 FAX  
(303) 832-4224 PHONE

**RESERVATION DEADLINE:**  
Friday, April 8, 2005

Game tickets are limited to a first come, first served basis. Make your reservations today!

### SMACNA Colorado/ASHRAE Reception Registration

Company \_\_\_\_\_

Contact \_\_\_\_\_ Phone \_\_\_\_\_

Attendee(s)

\_\_\_\_\_ @ \$90 each \_\_\_\_\_ @ \$90 each

\_\_\_\_\_ @ \$90 each \_\_\_\_\_ @ \$90 each

\_\_\_\_\_ @ \$90 each \_\_\_\_\_ @ \$90 each

TOTAL ENCLOSED \$ \_\_\_\_\_





# WORKSHOP



## LEED-EB Technical Review Workshop

Saturday, April 30<sup>th</sup>, 2005 • 8:30 am - 5:00 pm

Hampton Inn Denver West Federal Center

Ponderosa/Evergreen Room

137 Union Boulevard

Lakewood, CO 80228

The LEED Green Building Rating System is a comprehensive, voluntary design and assessment tool that helps architecture, engineering and construction professionals improve building efficiency, and measure the sustainability of their projects. Understanding LEED is an important step for reducing environmental impacts and achieving superior economic performance. *Architects, engineers, facility managers and building owners* who master LEED concepts and processes become knowledgeable practitioners and consumers of green design and construction.

### LEED for Existing Buildings

*LEED-EB* is part of a comprehensive suite of LEED assessment tools developed by the USGBC to promote the sustainable design, construction, operations, and maintenance of the built environment. Building owners and operators can meet their building operations goals while reducing the building's impact on the environment and improving occupant health and comfort over the building's entire life cycle.

*LEED-EB* applies to existing buildings seeking LEED Certification for the first time as well as projects previously certified under LEED-NC (for New Construction).

*LEED-EB* delivers the tools and practices to raise building operations and maintenance to peak performance while maintaining or reducing ever-rising operating costs. The *LEED-EB* criteria cover existing building systems upgrades, operations and maintenance. Building re-certification through *LEED-EB* maintains the building's high-performance over the long-term. For additional information on *LEED-EB* visit [www.usgbc.org/LEED](http://www.usgbc.org/LEED).

### LEED-EB Workshop

This session for building owners, facility managers and design teams will cover the technical requirements and the process for achieving certification under the newly released LEED for Existing Buildings Rating System.

Onsite registration begins at 8:00am; the workshop will take place from **8:30am - 5:00 pm**.

### REGISTRATION

Please visit our website: [www.usgbc.org](http://www.usgbc.org).

There are no prerequisites for this course. Anyone in the building industry is invited to attend. **Please note that late registration rates take effect one week prior to the workshop.**

#### FEES

USGBC Members  
Non-Members

#### REGULAR

\$325  
\$425

#### Late

\$355  
\$475



Hosted By:



USGBC is an AIA/CES  
Registered Provider of educational programs.  
7 HSW Credits





# WORKSHOP



## **LEED-NC Technical Review** **(formerly LEED Intermediate Workshop)** **Saturday, April 30<sup>th</sup>, 2005 • 8:30 am – 5:00 pm** **Hampton Inn Denver West Federal Center** **Aspen/Spruce Room** **137 Union Boulevard** **Lakewood, CO 80228**

### **REGISTER TO ATTEND A LEED TRAINING WORKSHOP IN YOUR AREA**

The LEED Green Building Rating System is a comprehensive, voluntary design and assessment tool that helps architecture, engineering and construction professionals improve building efficiency, and measure the sustainability of their projects. Understanding LEED is an important step for reducing environmental impacts and achieving superior economic performance. Architects, engineers, facility managers and building owners who master LEED concepts and processes become knowledgeable practitioners and consumers of green design and construction.

### **HOW TO REGISTER**

Anyone in the building industry is invited to attend. For more information on LEED Training Workshops or to register for a workshop near you, visit [www.usgbc.org](http://www.usgbc.org). **Please note that late registration rates take effect one week prior to the workshop.**

| <b>FEES</b>   | <b>Regular</b> | <b>Late</b> |
|---------------|----------------|-------------|
| USGBC Members | \$325          | \$355       |
| Non-Members   | \$425          | \$475       |

USGBC is an AIA/CES Registered Provider of educational programs - 7 HSW Credits

*Hosted by:*



### **LEARN TO APPLY LEED TO YOUR DESIGN PRACTICE AND BUILDING PROJECTS BY ATTENDING A LEED WORKSHOP.**

- Introduce yourself to green-building design benefits and strategies.
- Learn how to use the LEED Green Building Rating System.
- Learn about green building resources to use in your projects.
- Acquire the tools and insights for leveraging green design and LEED into your practice and differentiate yourself in the marketplace.
- Become an educated consumer of sustainable building practices.
- Help prepare yourself to sit for the LEED Accredited Professional exam.

### *Workshop attendees will receive:*

- The LEED-NC training workbook and speakers notes
- The LEED-NC Green Building Rating System
- Online access to the LEED-NC 2.0 & 2.1 Reference Guide
- The option to purchase the LEED-NC 2.1 Reference Package at a discounted price
- Exclusive one-year access to the LEED credit interpretation rulings



USGBC is an AIA/CES  
Registered Provider of educational programs.  
7 HSW Credits





# INTERNSHIP



## EMILY GRIFFITH AND BOAC TEAM UP FOR INTERNSHIPS AND JOB SHADOWING:

Emily Griffith School of Opportunity teaches everything from aircraft maintenance to web page development and all of the classes in between. They have an excellent HVAC program and many of those students would like to **work part-time** while they are going to school. If you have any positions that might help students earn some money to pay for their education, we would love to hear from you.

Additionally, students do paid and unpaid **internships**. An internship is a training experience that allows a student to work with an expert in the field of HVAC. Students, if unpaid, are covered under the Denver Public School's Workers' Compensation program and their general liability insurance. Students are able to intern mornings or afternoons or 2 days per week.

Another program sponsored by Emily Griffith is **job shadowing**. BOAC would like to offer the opportunity for members to introduce our industry to potential new comers by having a student spend a day at a business and follows an engineer around.

If you are interested in any of the above programs please contact: Chris McGuire at 303-575-4745 or e-mailed at [cdc@dpsk12.org](mailto:cdc@dpsk12.org) or within BOAC, Kim Lewis 303-232-0090 or e-mail at [hotshot@hotshotir.com](mailto:hotshot@hotshotir.com).





NAME: \_\_\_\_\_ , \_\_\_\_\_ , \_\_\_\_\_  
 (LAST) (FIRST) (MI)

STATUS: RENEWAL \_\_\_\_\_ NEW MEMBER \_\_\_\_\_ ADDRESS CHANGE \_\_\_\_\_

PLEASE CIRCLE PREFERRED MAILING ADDRESS:

HOME ADDRESS

BUSINESS ADDRESS

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

PHONE \_\_\_\_\_

PHONE \_\_\_\_\_

email \_\_\_\_\_

I WOULD LIKE TO BE CONTACTED ABOUT SERVING ON ONE OF THE FOLLOWING COMMITTEES OR FUNCTIONS (PLEASE CIRCLE).

- |                       |                                 |                     |
|-----------------------|---------------------------------|---------------------|
| A. MEMBERSHIP         | H. RESEARCH FUND PROMOTIONS     | O. NEWSLETTER       |
| B. ROSTER             | I. MONTHLY MEETING PROGRAMS     | P. SOCIAL COMMITTEE |
| C. MEETING ATTENDANCE | J. PUBLICITY                    |                     |
| D. EDUCATION          | K. LADIES NIGHT                 |                     |
| E. GOLF               | L. COLORADO ENGINEERING COUNCIL |                     |
| F. CHAPTER HISTORIAN  | M. GENERAL (COMMITTEE HELP)     |                     |
| G. TECHNICAL SEMINARS | N. ENERGY COMMITTEE             |                     |

PLEASE MAIL THIS INVOICE AND YOUR CHECK FOR \$35.00 (PAYABLE TO **ROCKY MOUNTAIN CHAPTER ASHRAE**) TO THE FOLLOWING:

LARRY HODGINS  
 EMPIRE GAS & ELECTRIC EQUIPMENT COMPANY  
 1635 W. 13<sup>TH</sup> AVENUE, DENVER CO 80204

303.886.5577

[rmc-ashrae@ljhpe.com](mailto:rmc-ashrae@ljhpe.com)

[www.rockymtnashrae.com](http://www.rockymtnashrae.com)







## APRIL EMPLOYMENT LISTINGS

Position: **Mechanical Engineer / Mechanical Designer**  
Company: Cator, Ruma & Associates  
Web Site: [www.catorruma.com](http://www.catorruma.com)  
Main Phone: 303.462.8438  
Fax: 303.233.3701  
Address: 1550 Dover Street, Suite 2  
Denver, CO 80215

Contact: human resources  
Contact Phone: 303-974-1219  
Contact Email: [cra@catorruma.com](mailto:cra@catorruma.com)

### More Info:

Cator, Ruma & Associates is a mechanical and electrical consulting engineering firm that has enjoyed an excellent reputation for over 45 years. We are seeking a few experienced engineers/designers to join our team. Candidates should have a minimum of 5 years experience in commercial /institutional mechanical systems design. We can offer you an excellent salary, fully paid major medical, 401K, flex time and Friday afternoons off. Fax your resume, e-mail us, or visit our website at [www.catorruma.com](http://www.catorruma.com).

Position: **Senior HVAC Commissioning Engineer**  
Company: E M C Engineers, Inc.  
Web Site: [www.emcengineers.com](http://www.emcengineers.com)  
Main Phone: 303-974-1200  
Fax: 303-974-1239  
Address: 143 Union Blvd., Suite 350  
Lakewood, CO 80228

Contact: Don Davenport  
Contact Phone: 303-974-1219  
Contact Email: [ddavenport@emcengineers.com](mailto:ddavenport@emcengineers.com)

### More Info:

E M C Engineers specializes in energy analysis/modeling, design, construction and commissioning of high performance buildings, with emphasis in HVAC, utility and control systems.

Successful candidate must possess a B.S. in Mechanical or Architectural Engineering, with 10 to 20 years in troubleshooting, testing and commissioning HVAC and control systems in buildings, or equivalent technical education and experience. P.E. desired. Candidate must possess strong communication skills, with experience in on-site, hands-on activity, leading project teams, coordination staff and sub-consultants, and be skilled in professional client communications. Candidate must also be able to lead, mentor, and develop other commissioning engineering and technical staff. Experience in sustainable, high performance facilities and LEED projects, including LEED AP is a plus.





# EMPLOYMENT



Position: **Staff Energy Engineer**  
Company: E M C Engineers, Inc.  
Web Site: [www.emcengineers.com](http://www.emcengineers.com)  
Main Phone: 303-974-1200  
Fax: 303-974-1239  
Address: 143 Union Blvd., Suite 350  
Lakewood, CO 80228

Contact: Don Davenport  
Contact Phone: 303-974-1219  
Contact Email: [ddavenport@emcengineers.com](mailto:ddavenport@emcengineers.com)

## More Info:

EMC provides Energy Engineering services in the form of energy audits for commercial and industrial clients and energy optimization for new construction.

A Professional Engineers license is preferred, though not required for this Staff position. Candidate should have experience performing energy audits for private entities, ESCO's and Utilities. Position requires field investigation, report writing, analysis, and energy modeling skills, as well as experience from initial walk-thru to final inspection and commissioning.

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Position: **Junior Energy Engineer**  
Company: E M C Engineers, Inc.  
Web Site: [www.emcengineers.com](http://www.emcengineers.com)  
Main Phone: 303-974-1200  
Fax: 303-974-1239  
Address: 143 Union Blvd., Suite 350  
Lakewood, CO 80228

Contact: Don Davenport  
Contact Phone: 303-974-1219  
Contact Email: [ddavenport@emcengineers.com](mailto:ddavenport@emcengineers.com)

## More Info:

EMC provides Energy Engineering services in the form of energy audits for commercial and industrial clients and energy optimization for new construction.

Candidate should have BS or MS in mechanical engineering with particular skills in thermodynamics, heat transfer, architectural engineering, and sustainable design. Experience with building energy simulation modeling, daylighting modeling, and high-efficiency lighting design is a plus.

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Position: **Temperature Control Sales**  
Company: Autocon, Incorporated  
Fax: 303-287-4809  
Address: Denver, Colorado





# EMPLOYMENT



Contact Phone: Voice mail, 303-480-5864  
Contact Email: Controls2005@yahoo.com

## More Info:

Autocon has been providing Temperature Control systems in the Colorado market place for 25 years. We are a top producer for the controls manufacturer we represent.

Position requires experience estimating all types of temperature control systems. Electrical estimating is also a benefit.

We offer A full package of benefits, ie: medical, 401(k), etc.

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Position: **HVAC/Plumbing Designer**  
Company: The CE Group  
Main Phone: 970-266-9888  
Fax: 970-266-8876  
Address: 400 Remington Street  
Fort Collins, CO 80524

Contact: Nancy D'Rosario  
Contact Phone: 970-266-9888  
Contact Email: NancyD@theCEgroup.com

## More Info:

The CE Group is a small Consulting Engineering Firm that has been in business since 1998 specializing in HVAC and Plumbing Design for Commercial, Industrial and Institutional Projects. We are a progressive company with current projects in Colorado, Nevada, Arizona, Wyoming and Nebraska. We offer a competitive salary, performance bonus, benefits and 401K plan.

We are looking for an experienced designer who is dedicated, self-motivated, career-minded, and has a full range of skills related to mechanical design including proficiency in AutoCAD 2000 or higher and load analysis software. Experience with Autodesk Building Systems and Carrier HAP 4.2 a plus. The ideal candidate will have design experience related to the types of work noted above and be able to work well with sub-consultants and clients.

If you are seeking a supportive environment that has opportunity for learning and growth, we would like to consider you for a place on our team. Consider joining our casual, small office in Ft. Collins. Please e-mail resume to: NancyD@theCEgroup.com

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Position: **Project Design Engineer**  
Company: Design Mechanical  
Web Site: www.comfortsystemsusa.com  
Main Phone: 303-449-2092  
Fax: 303-449-8739  
Address: 168 CTC Blvd, Suite D  
Louisville, CO 80027







# EMPLOYMENT



Contact: Rich Bengé  
Contact Phone: 303-661-1720  
Contact Email: rbenge@comfortsystemsusa.com

## More Info:

Design Mechanical is a full service design/build mechanical contractor with in-house design services that support our construction efforts. Our main office is in Louisville with satellite offices in Eagle and Telluride Colorado. We are seeking a project design engineer to work in our Louisville engineering department. The ideal candidate would have a minimum of 3 to 5 years of experience in designing commercial HVAC and plumbing systems within a design/build environment. PE license is a plus but not a requirement. Excellent benefit package. Salary commensurate with experience. Please send resume and references to Rich Bengé at the above mailing or email address.

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Position: **Project Engineer**  
Company: The Ballard Group, Inc.  
Main Phone: 303-988-4514  
Fax: 303-988-4517

Address: 2525 South Wadsworth Blvd.  
Suite 200  
Lakewood, CO 80227

Contact: Steve Franz  
Contact Email: sfranz@theballardgroup.com

## More Info:

The Ballard Group is a mechanical design firm that has been in business since 1979. We design HVAC, plumbing and fire protections systems for a wide variety of installations, including hospitals, recreation centers, k-12 and higher education.

We are looking for employees who are dedicated, career-minded, and have a desire to develop a full range of skills related to mechanical design. The ideal candidate will have some high quality design experience related to the types of work noted above. A wide range of experience levels will be considered, and salary will be commensurate with experience. There are opportunities both in the HVAC and plumbing sides of our business.

If you are seeking a supportive environment that has opportunity for learning and growth, and you have drive and determination, we would like to consider you for a place on our team.

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Position: **Mechanical Engineer**  
Company: M-E Engineers, Inc.  
Web Site: www.me-engineers.com  
Main Phone: 303-421-6655  
Fax: 303-421-0331  
Address: 10055 W. 43<sup>rd</sup> Ave.  
Wheat Ridge, CO 80033





# EMPLOYMENT



Contact: Trish Lovato  
Contact Phone: 303-421-6655  
Contact Email: tlovato@me-engineers.com

## More Info:

M-E Engineers, Inc. is a national engineering firm seeking Mechanical Engineers to work on sports facilities, laboratories, health care and commercial projects. Preferred candidates should have 3+ years experience in the design of HVAC and plumbing systems. These positions require strong technical abilities, organizational skills and attitude. PE preferred. Excellent salary and benefit package. Send resumes to : M-E Engineers, Inc. Attn: Trish Lovato, 10055 W. 43<sup>rd</sup> Ave., Wheat Ridge, CO 80033 or e-mail: tlovato@me-engineers.com.

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Position(s): **Sales Engineer and Inside Sales Engineer**  
Fax: 720-889-1519  
Contact: Sales Manager  
Contact Email: denverjobsa@yahoo.com

## More Info:

A Fortune 500 company, and a leading worldwide Manufacturer of HVAC&R equipment is currently looking for a Salesperson and an Inside Salesperson. We provide innovative products and services for a full range of projects from a single house to Large Campus'. Candidates should have extensive industry experience in HVAC sales or HVAC design. All replies are confidential.

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Position: **Piping Detailer/Designer**  
Company: Trautman & Shreve, Inc.  
Web Site: www.trautman-shreve.com  
Main Phone: 303-295-1414  
Fax: 303-295-0324  
Address: 4406 Race Street  
Denver, CO 80216

Contact: Personnel Department  
Contact Phone: 303-295-1414

## More Info:

### Qualifications:

- Minimum 5 years experience in routing, coordination, and detailing of piping for HVAC or plumbing systems for hospitals, labs, commercial office buildings, etc.
- Proficient in Auto CAD 2000 or higher.
- Minimum 1 year experience working with 3D-CAD software (Quickpen 3D pipe designer strongly preferred).
- Ability to create 3D-coordinated shop drawings in a multi-discipline environment.
- Familiarity with isometric and fabrication drawings.
- Exposure to Navis Works viewing and collision check software.
- Committed to meeting short-duration schedules.
- A proven record of accomplishment and verifiable references are required.

Please fax resumes to the number listed above.



## FIRST CLASS

Chapter may not act for Society. Expressions, opinions, and comments within this newsletter should not be taken as those of the Chapter or Society.

Rocky Mountain Chapter of ASHRAE  
c/o Ginger Schulz  
Murphy Company  
3790 Wheeling Street  
Denver, CO 80239



# ACTIVITIES CALENDAR



For membership info or change of address contact: Larry Hodgins • Empire Gas • lhodgins@empiregas.com

### ASHRAE Events

April 6, 2005

#### *Student Night*

Dinner Meeting Topic & Tour (4:30pm): Exempla-Good Samaritan

May 4, 2005

Dinner Meeting Topic: High-End Home Design

May 13, 2005

13<sup>th</sup> Annual ASHRAE Technical Conference

**\*\*June 25-29, 2005**

***ASHRAE National Meeting at Adams Mark Hotel***

**\*\*August 22, 2005**

***GOLF TOURNAMENT at Hiwan Golf Course***

**Don't forget your ASHRAE National Dues!!!**

**Visit the new Rocky Mountain ASHRAE**

website: [www.rockymtnashrae.com](http://www.rockymtnashrae.com)





NEWSLETTER OF THE ROCKY MOUNTAIN CHAPTER  
AMERICAN SOCIETY OF HEATING, REFRIGERATING, AND AIR-CONDITIONING ENGINEERS, INC.

Volume 46, Number 9

**MAY 2005**

Editor: *Ginger Schulz*

Visit the new Rocky Mountain ASHRAE website: [www.rockymtnashrae.com](http://www.rockymtnashrae.com)

**Date:** May 4, 2005

**Cost:** Rocky Mtn Chapter Members-\$25\*  
\*With Reservations Made Before Monday Noon

**Dinner Location:** Wynkoop Brewing Company  
1634 18th St.  
Denver, CO 80202  
(Downtown, Corner of 18<sup>th</sup> & Wynkoop)

Guests, Non-members or Without Reservation - \$30  
Students - \$20

**Time:** 5:30 Social Hour (Wynkoop)  
6:30 Dinner (Wynkoop)  
7:00 Program Begins (Wynkoop)

**RSVP: Scott Martin**  
E-mail: [smartin@rmhgroup.com](mailto:smartin@rmhgroup.com)



## May Program and Speakers



### Custom Home Design - Mike Day M-E Engineers

Have you ever wondered what was inside all of those million dollar homes in Vail? Home theater, wine cellars, computer systems, high ceiling with lots of glass, what else is on the must have list these days for the VIPs of the world. Mike Day with M-E Engineers has designed systems for his share of high end homes and he is going to share his insights with us. He will detail what people are expecting and how those goals are being accomplished.

See everyone at the Wynkoop for our last meeting of the 2004/05 program series.

Kevin Parrot



# ASHRAE ROSTER



## Rocky Mountain Roster

|                     |                 |                                                                                  |
|---------------------|-----------------|----------------------------------------------------------------------------------|
| President           | Dave Rodenberg  | <a href="mailto:drodenberg@long.com">drodenberg@long.com</a>                     |
| President Elect     | John Stumpf     | <a href="mailto:john@burchassociates.com">john@burchassociates.com</a>           |
| Vice President      | Kevin Parrot    | <a href="mailto:KevinP@trinity-mechanical.com">KevinP@trinity-mechanical.com</a> |
| Secretary           | Brian Lynch     | <a href="mailto:brian.lynch@york.com">brian.lynch@york.com</a>                   |
| Treasurer           | Scott Martin    | <a href="mailto:smartin@rmhgroup.com">smartin@rmhgroup.com</a>                   |
| Newsletter Editor   | Ginger Schulz   | <a href="mailto:gschulz@murphy-den.com">gschulz@murphy-den.com</a>               |
| Membership          | Larry Hodgins   | <a href="mailto:lhodgins@empiregas.com">lhodgins@empiregas.com</a>               |
| Refrigeration       | Dave Rodenberg  | <a href="mailto:drodenberg@long.com">drodenberg@long.com</a>                     |
| Historian           | Steve Maxson    | <a href="mailto:smaxson@sbengr.com">smaxson@sbengr.com</a>                       |
| Technology Transfer | Jeremy Hollands | <a href="mailto:jhollands@catorruma.com">jhollands@catorruma.com</a>             |
| Resource Promotions | John Stumpf     | <a href="mailto:john@burchassociates.com">john@burchassociates.com</a>           |
| Web Master          | Kyle Manske     | <a href="mailto:kmanske@comfortsystemsusa.com">kmanske@comfortsystemsusa.com</a> |
| Education Chairman  | Kevin Ainsworth | <a href="mailto:kainsworth@mcgrath-inc.com">kainsworth@mcgrath-inc.com</a>       |
| Director            | Lynda Rodenberg | <a href="mailto:Lfuller@mcgrath-inc.com">Lfuller@mcgrath-inc.com</a>             |
| Director            | Kate Allen      | <a href="mailto:kallen@caveoeng.com">kallen@caveoeng.com</a>                     |





# President's Message



Hello Members,

Thanks to all who attended our meeting last month. We all had the opportunity to tour the Exempla Good Samaritan Hospital in Louisville. The project has a remote central plant and, since it's a health care facility, special control and operating room requirements. Special thanks to Mark Jelinske who not only helped lead the tours, but also had a great dinner presentation describing the unique challenges required with any health care project.

This month is our last meeting of this season. We will all take the summer off and start up again in September. Of course, this summer we will have our annual golf tournament and we also have our annual Technical Conference coming up on May 13<sup>th</sup>. See the details elsewhere in this newsletter, but I fully expect to see all of our membership take advantage of this conference. It's a great way to get inexpensive training and also earn PDH credits towards your PE license.

Also in this issue is an opportunity for our membership to vote on who will be the next board members of our local chapter. If you are interested in being that person, you can write your name in. Better yet, come see me about getting involved on a committee next September - you can see if you like being involved and get to know the people you would be working with.

Since this is my last meeting as chapter president, I would like to thank everybody on the board for all their hard work and dedication to our local ASHRAE chapter. We wouldn't do this if it wasn't lots of fun and I wouldn't have had fun without you all. After I leave the board, I still get to play in the pool tournaments right?

Thank you all for your help and continued support of our ASHRAE organization.

David Rodenberg  
drodenberg@long.com  
ASHRAE Rocky Mountain Chapter President





# RESEARCH



## ASHRAE Research Donor of the Month

We are coming down to the last month to support our 2004-2005 Research Campaign. Our Goal is to raise approximately \$34,000.00 for ASHRAE Research prior to June 30, 2005. At this point we have raised about 32%.

The members of our committee will be contacting you via the calling campaign and I encourage you to take their calls and support ASHRAE. I recognize that our biggest fundraiser is the Technical Conference, but that only accounts for about 40%. If you have any questions please don't hesitate to call or email me.

We also have another program that we do at our dinner meeting called 50/50. We raffle off a gift from an individual or company and 50% goes toward research and the other goes into a pot. I want to thank Jeremy Holland with Cator, Ruma & Associates for donating 4 Rockies tickets. Fred Denton with The RMH Group won the tickets and has already had an opportunity to go see Gen R in action. We raised an additional \$90.00 of which \$45.00 will go to ASHRAE and \$45.00 will go into the pot, so whoever wins the raffle will also win the pot worth about \$150.00.

I want to personally thank all those that contributed to ASHRAE Research to this point, especially, CFM Company, McGrath Inc., BCER, Shaffer /Baucom, Blender Products, Engineered Products, Long Associates, and Burch Associates. Each of these companies have contributed at least \$500.00.

John Stumpf  
Resource Promotion  
303-647-1577  
[john@burchassociates.com](mailto:john@burchassociates.com)







# BALLOT



## Ballot: ASHRAE Junior Board Members

**To All Members:** As a member of the Rocky Mountain Chapter of ASHRAE, you are encouraged to get involved with the Board of Governors who are responsible for organizing th meetings, planning the technical programs, raising funds for research, planning parties and other social events, getting students involved, etc.

The members listed below have expresses interest in getting involved on the Board of Governors. Some basic biographical information is attached. You can also write in anyone (especially yourself) who you think may be a good candidate for the Board.

The new Junior Board Member is selected by a majority vote. Please fax this ballot to 303-936-2755 (Attn: David Rodenberg) or you can also vote in person at the monthly meeting on May 4<sup>th</sup> where we will have ballots available.

Thank you for your participation and I hope you decide to get involved!

(Vote for One)

Jeremy Hollands \_\_\_\_\_

Justin Duncan \_\_\_\_\_

Write-in Candidate: \_\_\_\_\_

See the next page for the biographical information on these candidates. Voting instructions are listed above. Please email [drodenberg@long.com](mailto:drodenberg@long.com) with any questions.





# CANDIDATES



## ASHRAE Board of Governors Junior Board Member candidates

**Jeremy D. Hollands**, ASHRAE Associate Member, is a Mechanical Engineer at Cator, Ruma and Associates, Lakewood, Co. He graduated from the University of Colorado, Boulder in May 2001, and currently serves as the TEGA committee chair for The Rocky Mountain Chapter. He is a LEED A.P. and has been involved in both Greenfield construction and remodels, focusing in Healthcare and Hospitality.

**Justin Dunkin** is an Outside Salesman at the CFM Company BAC Office. Justin has been with CFM Company for approximately 2 years and 11 months. Justin received a BS in Architectural Engineering with a Mechanical Emphasis from the University of Wyoming. Justin has passed the Fundamentals of Engineering Exam and is currently an E.I.T. Justin was a student member of ASHRAE at the University of Wyoming for three years and served as Chapter President his senior year. Justin was also one of the recipients of the Rocky Mountain ASHRAE Student Scholarship his senior year. Since moving to Colorado, Justin has been active in the Rocky Mountain Chapter and hopes to continue his involvement with an election to the board.

## PLEASE VOTE!!





# ANNOUNCEMENTS



## **ASHRAE/SMACNA Colorado 2005 HVAC&R Mechanical Equipment & Product Directory**

Available for purchase at the May meeting for only \$40 a copy!

A complete list of available product lines and services makes this directory an invaluable resource! It includes current product and contract information for representatives, distributors, wholesalers, engineers, contractors and other related businesses within the HVAC&R industry.

Look for it at the monthly ASHRAE meeting or contact Kate Allen, Caveo Consulting Engineers at 720-200-5955 or [kallen@caveoeng.com](mailto:kallen@caveoeng.com).

## **Let ASHRAE Train Your Employees!**

The ASHRAE Learning Institute can offer a 1-day Professional Development Seminar to any interested companies or groups. The benefits include: Continuing Education Credits (PDH and LU), the opportunity for members to attend a high quality seminar presented by a nationally recognized instructor(s) for a registration fee of \$250, the technical material will be free from commercialism and peer reviewed for technical accuracy, and 60% of the revenue earned stays with the Rocky Mountain chapter. Available topics are as follows:

- Optimizing the Design and Control of Chilled Water Plants
  - System Selection and Report
  - Determining Energy Savings from Performance Contracting Projects-Measurement and Verification
  - Economic Analysis of Engineering Projects: Life-Cycle Costing
  - Understanding and Specifying Basic BACnet Systems
  - Building Retrofit for Energy Efficiency

The local ASHRAE chapter will take care of setting up everything. A minimum of 10 attendees is required to present this seminar. Please contact David Rodenberg, [drodenberg@long.com](mailto:drodenberg@long.com) if interested.

## **ASHRAE Annual Meeting Announcement**

The upcoming 2005 ASHRAE Annual Meeting will be held on June 25-29 in Denver at the Adams Mark Hotel. Opportunities are available for participating on the Summer Meeting Planning Committee. This committee will coordinate with Society the planning of the event. In conjunction, the local chapter is requesting volunteers for monitoring the workshop sessions and being ambassadors for Denver activities. If you are interested in helping out please contact Dave Rodenberg, [drodenberg@long.com](mailto:drodenberg@long.com)





# ANNOUNCEMENTS



**ASHRAE Summer Meeting - June 26,27,28,29**  
**Adams Mark Hotel downtown Denver**

ASHRAE needs volunteers to be monitors for technical sessions at the upcoming summer meeting!!

What you get:

FREE REGISTRATION TO ALL TECHNICAL SESSIONS (\$300 value) See list of technical sessions on-line at [www.ashrae.org](http://www.ashrae.org) (click on 'meetings & events')

What you do:

Work for 2 hours. You must monitor just one technical session. Monitoring consists of making sure all attendees in the session are registered; keeping track of time for the speaker; working the lights and the door. Easy stuff.

How to Volunteer:

Send your name, mailing address and phone number to Dave Willetts at: [DWILLETTS@JLHERMON.COM](mailto:DWILLETTS@JLHERMON.COM) Advise Dave what day(s) you can be available (June 26,27,28,29). If you have no preference, please let Dave know.

You also must register on-line so you can take advantage of your free entry into all the remaining technical sessions (that you are not monitoring). Log on to [www.ashrae.org](http://www.ashrae.org) (click on 'meetings & events') and register after contacting Dave.

**\*\*\*DEADLINE FOR CONTACTING DAVE TO VOLUNTEER MAY 10<sup>th</sup>**  
**\*\*\***



# “Avoid HVAC Bad Luck”

## The 2005 Rocky Mountain Chapter ASHRAE Technical Conference



|                |                                                                                                                                                                                                                                |                                                                                                                                        |                                                                                                                            |                                                                                                                                                                   |
|----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 7:30 to 8:00   | <b>Registration and Continental Breakfast</b>                                                                                                                                                                                  |                                                                                                                                        |                                                                                                                            |                                                                                                                                                                   |
|                | <b>HVAC&amp;R Basics</b>                                                                                                                                                                                                       | <b>HVAC&amp;R Advanced</b>                                                                                                             | <b>Energy and Environment</b>                                                                                              | <b>Building Automation</b>                                                                                                                                        |
|                | <i>Sponsored by:</i>                                                                                                                                                                                                           | <i>Sponsored by:</i>                                                                                                                   | <i>Sponsored by:</i>                                                                                                       | <i>Sponsored by:</i>                                                                                                                                              |
|                | CFM Company                                                                                                                                                                                                                    | McNevin Company                                                                                                                        | Empire Gas & Electric Company                                                                                              | LONG Building Technologies                                                                                                                                        |
| 8:0 to 8:55    | <i>Fan Selection Basics</i><br>Jerry Kiel<br>Kiel Consulting                                                                                                                                                                   | <i>Chilled Water System Forensics</i><br>Ken Luther<br>ITT Fluid Technology Corp.                                                      | <i>ASHRAE 62.1-2004 Revisions</i><br>Dave Kahn<br>RMH Group                                                                | <i>Optimized HVAC Control Strategies</i><br>Erik Jeannette, P.E.<br>Architectural Energy Corp.                                                                    |
| 9:00 to 9:55   | <i>Steam System Fundamentals</i><br>Dick Schedel<br>Mountain States Engineering and Controls                                                                                                                                   | <i>Maximizing Energy Savings with Ground Source Heat Pumps</i><br>Trey Austin<br>EMC Engineers                                         | <i>Defining Quality in the Indoor Environment</i><br>Bill Mele<br>Indoor Environmental Solutions, Inc.                     | <i>BAS System and Communications Basics</i><br>Steve Frederickson<br>C.W. Industries                                                                              |
| 9:55 to 10:10  | <b>Morning Break<br/>(Break Sponsors)</b>                                                                                                                                                                                      |                                                                                                                                        |                                                                                                                            |                                                                                                                                                                   |
| 10:10 to 11:05 | <i>Air Cooled vs. Water Cooled Chillers</i><br>Mike Fulton<br>York International                                                                                                                                               | <i>Smoke Management</i><br>Greg Bradshaw<br>Engineering Economics, Inc.                                                                | <i>Programs &amp; Activities of the OEMC</i><br>Ed Lewis<br>Colorado Governor's Office of Energy Management & Conservation | <i>HVAC Control Design</i><br>Ira Goldschmidt, P.E., LEED®<br>Goldschmidt Engineering Solutions                                                                   |
| 11:05 to 11:35 | <b>Vendor Exhibits</b>                                                                                                                                                                                                         |                                                                                                                                        |                                                                                                                            |                                                                                                                                                                   |
| 11:35 to 1:05  | <b>Lunch Break &amp; Keynote Address</b><br>Sponsored by: York International<br><b>Robert Strine</b><br><b>Van Gilder Insurance Corporation</b><br><b>“Risk Management and Business Practices for the Design Professional”</b> |                                                                                                                                        |                                                                                                                            |                                                                                                                                                                   |
| 1:05 to 1:35   | <b>Vendor Exhibits</b>                                                                                                                                                                                                         |                                                                                                                                        |                                                                                                                            |                                                                                                                                                                   |
| 1:35 to 2:30   | <i>Cooling Tower Basics</i><br>Gene Krist<br>CFM Company                                                                                                                                                                       | <i>Old Steam Technology for New Steam System Design</i><br>Bob James<br>Thermaflo Engineering Co.                                      | <i>LEED</i><br>Lauren Yarmuth Denner<br>DOMANI                                                                             | <i>Future Trends in BAS Technology and Business</i><br>Greg Bradshaw<br>Engineering Economics                                                                     |
| 2:35 to 3:30   | <i>Pumping and Hydronic Systems</i><br>Mark Jelinski<br>Cator Ruma and Associates                                                                                                                                              | <i>Design Criteria for Hot Water Systems</i><br>Jeff Harris<br>PVI Industries                                                          | <i>Energy Star</i><br>Peter D'Antonio, PE<br>PCD Engineering Services, Inc.                                                | <i>Commissioning of BAS's</i><br>Jack Wolpert, Ph.D., C.E.M.<br>E Cube                                                                                            |
| 3:35 to 4:30   | <i>Psychrometrics</i><br>Skip Willenbrock<br>Jacobs Engineering                                                                                                                                                                | <i>What's new with Vivariums, Biocontainment Facilities, and the latest in Bio-decontamination</i><br>Bill Schultz<br>Phoenix Controls | <i>Commissioning</i><br>Pete Sabeff<br>Engineering Economics, Inc.                                                         | <i>Open Protocols: The Practical Implications of BACnet and LonWorks</i><br>Charles Klapperich<br>Energy Services of Colorado<br>Ken Nekvasil<br>Setpoint Systems |
| 4:30 to 5:00   | <b>Conference Conclusion-Cash Bar<br/>(Break Sponsors)</b>                                                                                                                                                                     |                                                                                                                                        |                                                                                                                            |                                                                                                                                                                   |

**Some Speakers and Presentations may be subject to change**



# REGISTRATION FORM

13th Annual Technical Conference

Friday, May 13, 2005

Sheraton Hotel Denver West – 360 Union Boulevard, Lakewood CO 80228



Presented by:

**The ASHRAE Rocky Mountain Chapter**

*Register by May 6, 2005 to ensure space availability.*

*Checks received after May 6th (or walk-ins the day of the seminar) will be accommodated pending space availability.*

Please photocopy this form for additional attendees and for your records.

**Individual Registration:**

Your Name \_\_\_\_\_ Title \_\_\_\_\_

Company \_\_\_\_\_

Mailing Address \_\_\_\_\_

Phone \_\_\_\_\_ Fax \_\_\_\_\_

**Company Registration:**

Company \_\_\_\_\_

Mailing Address \_\_\_\_\_

Phone \_\_\_\_\_ Fax \_\_\_\_\_

**Seminar Preference:** (This is for space allocation only. You may attend any seminar during the conference.)

Check Your First and Second Preference

- **HVACR Fundamentals, Basics**
- **HVACR Fundamentals, Advanced Topics**
- **Energy and Environment**
- **Building Automation**

- **Please register me for...**
- **Please register my company for... \_\_\_\_\_ passes.**  
(quantity)

Check Your Preference

- Full day @ \$110.00, (Lunch included), (Total Number) \_\_\_\_\_
- 1/2 day at \$60.00, (Lunch is not included), (Total Number) \_\_\_\_\_
  - Morning Session
  - Afternoon Session

**Late Registration, received after after May 6, 2005, will be:**

**\$125.00, (includes lunch), \$65.00 1/2 day, (no lunch)**

10% Discount for 5 or more Company Passes

**Enclosed please find a check for: \$ \_\_\_\_\_ Mastercard/Visa total: \$ \_\_\_\_\_**

Please Make Checks payable to Rocky Mountain Chapter ASHRAE

• MC# \_\_\_\_\_ Cardholder Name \_\_\_\_\_ Exp Date: \_\_\_\_\_

• VISA# \_\_\_\_\_ Cardholder Name \_\_\_\_\_ Exp Date: \_\_\_\_\_

Please mail check and registration form to:

**John Stumpf - Burch Associates**

**2655 S. Santa Fe Dr., Bldg 4- Unit A**

**Denver, CO 80223**

**Phone: 303-649-1577 Fax: 303-649-1417**

**e-mail: [john@burvhassociates.com](mailto:john@burvhassociates.com)**

**For questions please contact: Brian Lynch, York International, [brian.lynch@york.com](mailto:brian.lynch@york.com) or fax: 720-889-1519**





# BOOTH REGISTRATION



## Vendor Exhibit Booth Registration Form

Rocky Mountain Chapter ASHRAE  
13<sup>th</sup> Annual Technical Conference & Expo  
Friday, May 13, 2005  
Sheraton Denver West Hotel (360 Union Blvd. in Lakewood)

We are asking for you and your company's support again this year with the Rocky Mountain Chapter ASHRAE's 13<sup>th</sup> Annual Technical Conference. This year's conference will focus on ASHRAE Standards in the HVAC&R industry. Seminars will be presented on HVAC&R Fundamentals, Advanced HVAC&R Topics, Building Automation, LEED Prerequisites, ASHRAE 90.1, ASHRAE Standards and Case Studies.

We plan to feature a scaled down product exposition with table top exhibit space provided for vendors again, at this year's conference. You can help support ASHRAE Research and promote your company's product line(s) by displaying a tabletop exhibit or booth. Six foot long tabletops or space for a booth will be offered on a first come first serve basis at a cost of \$350.00. One lunch is included with the cost of your registration for the tabletops/booths and additional lunches are available for \$25.00 each.

In addition, we will be requesting sponsors for our morning and afternoon refreshments with sponsors names listed on poster boards in the break area. Break sponsorships will cost \$100.00, or you may get both a tabletop and break sponsorship for \$425.00. Don't miss out on this opportunity to promote your company's products and services and support ASHRAE Research at the same time. Please fill out this sponsorship submission form and return it as soon as possible to:

**Kevin Ainsworth**  
**McGrath Inc.**  
[Kainsworth@mcgrath-inc.com](mailto:Kainsworth@mcgrath-inc.com)  
**Telephone: (303) 969-0220**  
**Fax: (303) 985-5565**  
**5353 W. Dartmouth Avenue, Suite 506**  
**Denver, CO 80227**

Company Name \_\_\_\_\_  
Address \_\_\_\_\_

Phone: \_\_\_\_\_  
Fax: \_\_\_\_\_

|                          |                        |               |          |
|--------------------------|------------------------|---------------|----------|
| Sponsorship (circle one) | 6' L Table Top / Booth | Break Sponsor | Both     |
|                          | \$350.00               | \$100.00      | \$425.00 |

Total including sponsorship and \_\_\_\_\_ additional lunches @ \$25.00 each

Total \$ \_\_\_\_\_.

Please enclose your check made payable to ASHRAE with your form and thank you for your support.





# GOLF



## ASHRAE GOLF TOURNAMENT

TO BENEFIT THE ROCKY MOUNTAIN ASHRAE SCHOLARSHIP FUND

HIWAN GOLF CLUB  
30671 CLUBHOUSE LANE  
EVERGREEN, COLORADO  
PHONE: (303) 674-3369

### MONDAY AUGUST 22, 2005

11:30 1:00 REGISTRATION / WARM-UP / LUNCH  
1:15 SHOT-GUN START  
6:00 AWARDS AND CASH BAR

**THE EVENT WILL INCLUDE:**

- TEE GIFTS
- AWARDS
- HOLE-IN-ONE PRIZE
- CLOSEST TO THE PIN
- LONG DRIVE

**FORMAT**

2-MAN SCRAMBLE OR  
STROKE PLAY (CHAMPIONSHIP)\*

\*Stroke Play Division is played with no handicap. Gross score only

### ENTRY DEADLINE August 15, 2005

Name \_\_\_\_\_  
Company \_\_\_\_\_  
Address \_\_\_\_\_  
City, State, Zip \_\_\_\_\_  
Phone: \_\_\_\_\_  
Fax: \_\_\_\_\_  
Email (optional) \_\_\_\_\_

| Players in Group | Division     | (circle one)   |
|------------------|--------------|----------------|
| ● _____          | Championship | 2-Man Scramble |
| ● _____          | Championship | 2-Man Scramble |
| ● _____          | Championship | 2-Man Scramble |
| ● _____          | Championship | 2-Man Scramble |

\_\_\_\_\_ # of Players @ \$150 each = \$ \_\_\_\_\_ (lunch and dinner included)

Make Checks Payable to **Rocky Mountain ASHRAE**

Please return to:

Kevin Ainsworth c/o McGrath Incorporated  
5353 W. Dartmouth Ave., Suite 506 Denver, CO 80227  
Phone: (303) 969-0220 Fax: (303) 985-5565  
Email: kainsworth@mcgrath-inc.com







# GOLF SPONSOR



## ASHRAE GOLF TOURNAMENT

The ASHRAE Golf Tournament funds the Rocky Mountain ASHARE scholarships program. Each year the Chapter awards four \$1000.00 scholarships to local college students. The Rocky Mountain ASHRAE Scholarship Fund's balance is over \$50,000.00.

Your support this year will help continue our chapter's scholarship program.

### MONDAY AUGUST 22, 2005

|                                            |                  |
|--------------------------------------------|------------------|
| <b>Sign at \$ 10,000 Hole-in-One Par 3</b> | <b>\$ 500.00</b> |
| <b>Sign at other Hole-in-One par 3s</b>    | <b>\$ 400.00</b> |
| <b>Sign at Tee Box or Green</b>            | <b>\$ 300.00</b> |

**SPONSORS DUE BY**

**August 8, 2005** Name \_\_\_\_\_

**Company** \_\_\_\_\_

**Address** \_\_\_\_\_

**City, State, Zip** \_\_\_\_\_

**Phone:** \_\_\_\_\_

**Fax:** \_\_\_\_\_

**Email (optional)** \_\_\_\_\_

**Sign at \$ 10,000 Hole-in-One Par 3** \_\_\_\_ @ \$ 500.00 = \_\_\_\_\_

**Sign at other Hole-in-One Par 3s** \_\_\_\_ @ \$ 400.00 = \_\_\_\_\_

**Sign at Tee Box or Green** \_\_\_\_ @ \$ 300.00 = \_\_\_\_\_

**Manufacturer's Signs** \_\_\_\_ @ \$ 50.00 = \_\_\_\_\_

**Total** = \_\_\_\_\_

Make Check Payable to **Rocky Mountain ASHRAE**

Please return to: Kevin Ainsworth c/o McGrath Incorporated

5353 W. Dartmouth Ave., Suite 506 Denver, CO 80227

Phone: (303) 969-0220 Fax: (303) 985-5565

Email: [kainsworth@mcgrath-inc.com](mailto:kainsworth@mcgrath-inc.com)

**List of Manufacturer's Signs**

|       |       |       |
|-------|-------|-------|
| _____ | _____ | _____ |
| _____ | _____ | _____ |
| _____ | _____ | _____ |





## MAY EMPLOYMENT LISTINGS

Position: Piping Detailer/Designer  
Company: Trautman & Shreve, Inc.  
Web Site: [www.trautman-shreve.com](http://www.trautman-shreve.com)  
Main Phone: 303-295-1414  
Fax: 303-295-0324  
Address: 4406 Race Street, Denver, CO 80216

Contact: Personnel Department  
Contact Phone: 303-295-1414

### More Info:

#### Qualifications:

- Minimum 5 years experience in routing, coordination, and detailing of piping for HVAC or plumbing systems for hospitals, labs, commercial office buildings, etc.
- Proficient in Auto CAD 2000 or higher.
- Minimum 1year experience working with 3D-CAD software (Quickpen 3D pipe designer strongly preferred).
- Ability to create 3D-coordinated shop drawings in a multi-discipline environment.
- Familiarity with isometric and fabrication drawings.
- Exposure to Navis Works viewing and collision check software.
- Committed to meeting short-duration schedules.
- A proven record of accomplishment and verifiable references are required.

Please fax resumes to the number listed above.

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Position(s): **Mechanical Engineer, Mechanical Engineer Intern**  
Company: The RMH Group, Inc.  
Web Site: [www.rmhgroup.com](http://www.rmhgroup.com)  
Main Phone: 303 239 0909  
Fax: 303 312 4609  
Address: 12600 W Colfax Ave Suite A400  
Lakewood CO 80215  
Contact: Jill Patterson  
Contact Phone: 303 239 2761  
Contact Email: [jpatterson@rmhgroup.com](mailto:jpatterson@rmhgroup.com)





# EMPLOYMENT



## More Info:

The RMH Group is a mechanical/electrical consulting engineering firm specializing in HVAC design for sustainable buildings. RMH is an Equal Opportunity Employer.

**Mechanical Engineer Qualifications:** ME/AE with 2-5 years HVAC design experience, energy modeling experience, and AutoCAD. LEED accreditation is a plus.

**Mechanical Engineer Intern Qualifications:** Minimum sophomore level ME/AE student with AutoCAD and some knowledge of and/or experience with HVAC design. Energy modeling experience desired.

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Position: **Mechanical Engineer, Mechanical Designer**  
Company: Cator, Ruma & Associates  
Web Site: [www.catorruma.com](http://www.catorruma.com)  
Main Phone: 303.462.8438  
Fax: 303.233.3701  
Address: 1550 Dover Street, Suite 2  
Denver, CO 80215

Contact: human resources  
Contact Phone: 303-974-1219  
Contact Email: [cra@catorruma.com](mailto:cra@catorruma.com)

## More Info:

Cator, Ruma & Associates is a mechanical and electrical consulting engineering firm that has enjoyed an excellent reputation for over 45 years. We are seeking a few experienced engineers/designers to join our team. Candidates should have a minimum of 5 years experience in commercial /institutional mechanical systems design. We can offer you an excellent salary, fully paid major medical, 401K, flex time and Friday afternoons off. Fax your resume, e-mail us, or visit our website at [www.catorruma.com](http://www.catorruma.com).

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Position: **Senior HVAC Commissioning Engineer**  
Company: E M C Engineers, Inc.  
Web Site: [www.emcengineers.com](http://www.emcengineers.com)  
Main Phone: 303-974-1200  
Fax: 303-974-1239  
Address: 143 Union Blvd., Suite 350  
Lakewood, CO 80228

Contact: Don Davenport  
Contact Phone: 303-974-1219  
Contact Email: [ddavenport@emcengineers.com](mailto:ddavenport@emcengineers.com)





# EMPLOYMENT



## More Info:

E M C Engineers specializes in energy analysis/modeling, design, construction and commissioning of high performance buildings, with emphasis in HVAC, utility and control systems.

Successful candidate must possess a B.S. in Mechanical or Architectural Engineering, with 10 to 20 years in troubleshooting, testing and commissioning HVAC and control systems in buildings, or equivalent technical education and experience. P.E. desired. Candidate must possess strong communication skills, with experience in on-site, hands-on activity, leading project teams, coordination staff and sub-consultants, and be skilled in professional client communications. Candidate must also be able to lead, mentor, and develop other commissioning engineering and technical staff. Experience in sustainable, high performance facilities and LEED projects, including LEED AP is a plus.

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Position: Staff Energy Engineer  
Company: EMC Engineers, Inc.  
Web Site: [www.emcengineers.com](http://www.emcengineers.com)  
Main Phone: 303-974-1200  
Fax: 303-974-1239  
Address: 143 Union Blvd., Suite 350  
Lakewood, CO 80228

Contact: Don Davenport  
Contact Phone: 303-974-1219  
Contact Email: [ddavenport@emcengineers.com](mailto:ddavenport@emcengineers.com)

## More Info:

EMC provides Energy Engineering services in the form of energy audits for commercial and industrial clients and energy optimization for new construction.

A Professional Engineers license is preferred, though not required for this Staff position. Candidate should have experience performing energy audits for private entities, ESCO's and Utilities. Position requires field investigation, report writing, analysis, and energy modeling skills, as well as experience from initial walk-thru to final inspection and commissioning.

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Position: **Junior Energy Engineer**  
Company: E M C Engineers, Inc.  
Web Site: [www.emcengineers.com](http://www.emcengineers.com)  
Main Phone: 303-974-1200  
Fax: 303-974-1239  
Address: 143 Union Blvd., Suite 350  
Lakewood, CO 80228

Contact: Don Davenport  
Contact Phone: 303-974-1219  
Contact Email: [ddavenport@emcengineers.com](mailto:ddavenport@emcengineers.com)





# EMPLOYMENT



More Info:

EMC provides Energy Engineering services in the form of energy audits for commercial and industrial clients and energy optimization for new construction.

Candidate should have BS or MS in mechanical engineering with particular skills in thermodynamics, heat transfer, architectural engineering, and sustainable design. Experience with building energy simulation modeling, daylighting modeling, and high-efficiency lighting design is a plus.

Position: **Temperature Control Sales**

Company: Autocon, Incorporated

Fax: 303-287-4809

Address: Denver, Colorado

Contact Phone: Voice mail, 303-480-5864

Contact Email: Controls2005@yahoo.com

More Info:

Autocon has been providing Temperature Control systems in the Colorado market place for 25 years. We are a top producer for the controls manufacturer we represent.

Position requires experience estimating all types of temperature control systems. Electrical estimating is also a benefit.

We offer A full package of benefits, ie: medical, 401(k), etc.

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Position: **HVAC/Plumbing Designer**

Company: The CE Group

Main Phone: (970) 266-9888

Fax: (970) 266-8876

Address: 400 Remington Street  
Fort Collins, CO 80524

Contact: Nancy D'Rosario

Contact Phone: (970) 266-9888

Contact Email: NancyD@theCEgroup.com

More Info:

The CE Group is a small Consulting Engineering Firm that has been in business since 1998 specializing in HVAC and Plumbing Design for Commercial, Industrial and Institutional Projects. We are a progressive company with current projects in Colorado, Nevada, Arizona, Wyoming and Nebraska. We offer a competitive salary, performance bonus, benefits and 401K plan.





# EMPLOYMENT



We are looking for an experienced designer who is dedicated, self-motivated, career-minded, and has a full range of skills related to mechanical design including proficiency in AutoCAD 2000 or higher and load analysis software. Experience with Autodesk Building Systems and Carrier HAP 4.2 a plus. The ideal candidate will have design experience related to the types of work noted above and be able to work well with sub-consultants and clients.

If you are seeking a supportive environment that has opportunity for learning and growth, we would like to consider you for a place on our team. Consider joining our casual, small office in Ft. Collins. Please e-mail resume to: [NancyD@theCEgroup.com](mailto:NancyD@theCEgroup.com)

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Position: **Project Design Engineer**  
Company: Design Mechanical  
Web Site: [www.comfortsystemsusa.com](http://www.comfortsystemsusa.com)  
Main Phone: 303-449-2092  
Fax: 303-449-8739  
Address: 168 CTC Blvd, Suite D  
Louisville, CO 80027

Contact: Rich Bengé  
Contact Phone: 303-661-1720  
Contact Email: [rbenge@comfortsystemsusa.com](mailto:rbenge@comfortsystemsusa.com)

## More Info:

Design Mechanical is a full service design/build mechanical contractor with in-house design services that support our construction efforts. Our main office is in Louisville with satellite offices in Eagle and Telluride Colorado. We are seeking a project design engineer to work in our Louisville engineering department. The ideal candidate would have a minimum of 3 to 5 years of experience in designing commercial HVAC and plumbing systems within a design/build environment. PE license is a plus but not a requirement. Excellent benefit package. Salary commensurate with experience. Please send resume and references to Rich Bengé at the above mailing or email address.





NAME: \_\_\_\_\_ , \_\_\_\_\_ , \_\_\_\_\_  
 (LAST) (FIRST) (MI)

STATUS: RENEWAL\_\_\_\_\_ NEW MEMBER\_\_\_\_\_ ADDRESS CHANGE\_\_\_\_\_

PLEASE CIRCLE PREFERRED MAILING ADDRESS:

HOME ADDRESS

BUSINESS ADDRESS

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

PHONE \_\_\_\_\_

PHONE \_\_\_\_\_

email \_\_\_\_\_

I WOULD LIKE TO BE CONTACTED ABOUT SERVING ON ONE OF THE FOLLOWING COMMITTEES OR FUNCTIONS (PLEASE CIRCLE).

- |                       |                                 |                     |
|-----------------------|---------------------------------|---------------------|
| A. MEMBERSHIP         | H. RESEARCH FUND PROMOTIONS     | O. NEWSLETTER       |
| B. ROSTER             | I. MONTHLY MEETING PROGRAMS     | P. SOCIAL COMMITTEE |
| C. MEETING ATTENDANCE | J. PUBLICITY                    |                     |
| D. EDUCATION          | K. LADIES NIGHT                 |                     |
| E. GOLF               | L. COLORADO ENGINEERING COUNCIL |                     |
| F. CHAPTER HISTORIAN  | M. GENERAL (COMMITTEE HELP)     |                     |
| G. TECHNICAL SEMINARS | N. ENERGY COMMITTEE             |                     |

PLEASE MAIL THIS INVOICE AND YOUR CHECK FOR \$35.00 (PAYABLE TO **ROCKY MOUNTAIN CHAPTER ASHRAE**) TO THE FOLLOWING:

LARRY HODGINS  
 EMPIRE GAS & ELECTRIC EQUIPMENT COMPANY  
 1635 W. 13<sup>TH</sup> AVENUE, DENVER CO 80204

303.886.5577

[rmc-ashrae@ljhpe.com](mailto:rmc-ashrae@ljhpe.com)

[www.rockymtnashrae.com](http://www.rockymtnashrae.com)



## FIRST CLASS

Chapter may not act for Society. Expressions,  
opinions, and comments within this newsletter should  
not be taken as those of the Chapter or Society.

Rocky Mountain Chapter of ASHRAE  
c/o Ginger Schulz  
Murphy Company  
3790 Wheeling Street  
Denver, CO 80239



# ACTIVITIES CALENDAR



For membership info or change of address contact: Larry Hodgins • Empire Gas • [lhodgins@empiregas.com](mailto:lhodgins@empiregas.com)

### ASHRAE Events

May 13, 2005

13<sup>th</sup> Annual ASHRAE Technical Conference

**\*\*June 25-29, 2005**

***ASHRAE National Meeting at Adams Mark Hotel***

**\*\*August 22, 2005**

***GOLF TOURNAMENT at Hiwan Golf Course***

September 7 (or 14), 2005

First Dinner Meeting of 2005-06

Visit the new Rocky Mountain ASHRAE

website: [www.rockymtnashrae.com](http://www.rockymtnashrae.com)







NEWSLETTER OF THE ROCKY MOUNTAIN CHAPTER  
AMERICAN SOCIETY OF HEATING, REFRIGERATING, AND AIR-CONDITIONING ENGINEERS, INC.

Volume 47, Number 1

SEPTEMBER 2005

Editor: Justin Dunkin

Visit the new Rocky Mountain ASHRAE website:  
[www.rockymtnashrae.com](http://www.rockymtnashrae.com)

**Date:** September 7, 2005

**Cost:** Rocky Mtn Chapter Members-\$25\*  
\*With Reservations Made Before Tuesday Noon

**Dinner Location:** Wynkoop Brewing Company  
1634 18th St.  
Denver, CO 80202  
(Downtown, Corner of 18<sup>th</sup> & Wynkoop)

Guests, Non-members or Without Reservation - \$30  
Students - \$20

**RSVP: Jeremy Hollands**  
E-mail: [jhollands@catorruma.com](mailto:jhollands@catorruma.com)

**Time:** 5:30 Social Hour (Wynkoop)  
6:30 Dinner (Wynkoop)  
7:00 Program Begins (Wynkoop)



## SEPTEMBER PROGRAM



### The Air Side of Air Handling Units

This month we are pleased to welcome Mr. John Kettler as our speaker. John's presentation will cover the use of Return Fans vs. Relief/Exhaust Fans, Measuring and Controlling Outdoor Airflow, and an Approach to Conserve Energy and Improve Mixing Box Efficiency.

John is the author of numerous ASHRAE Journal articles relating to airflow measurement and control. Most recently he authored Return Fans or Relief Fans in the April 2004 issue. He is a Life Member of ASHRAE and member of the ASHRAE Controls Committee TC 1.4 and Guideline 11 Committee-Field Testing of HVAC Controls and Components. John has five United States and International patents relating to HVAC control applications. He has been an instructor for Continuing Education Seminars for ASHRAE and the University of Wisconsin. With over 40 years experience in controls for HVAC systems, John is currently the Director of Control Applications for York International, past Supervisor of Field Engineering for Johnson Controls, Operations Manager for a controls contractor, and Vice President of Tempmaster and Wattmaster HVAC equipment and control manufacturers.

We look forward to seeing you at the Wynkoop!

Brian Lynch  
Vice President, Programs  
Rocky Mountain Chapter of ASHRAE



# ROCKY MOUNTAIN ROSTER



President .....John Stumpf.....john.stumpf@york.com

President Elect.....Kevin Parrot .....KevinP@trinity-mechanical.com

Vice President.....Brian Lynch .....brian.lynch@york.com

Secretary .....Scott Martin.....smartin@rmhgroup.com

Treasurer .....Jeremy Hollands .....jhollands@catorruma.com

Newsletter Editor .....Justin Dunkin .....justind@cfmcompany.com

Membership .....Larry Hodgins.....lhodgins@empiregas.com

Refrigeration .....Dave Rodenberg.....drodenberg@long.com

Historian.....Steve Maxson .....smaxson@sbengr.com

Technology Transfer .....Ken Urbanek.....kurbanek@mkkeng.com

Resource Promotions .....Kevin Parrot .....KevinP@trinity-mechanical.com

Web Master .....Kyle Manske .....kmanske@comfortsystemsusa.com

Education Chairman .....Kevin Ainsworth .....kainsworth@mcgrath-inc.com

Director .....Mark Jelinske .....mjelinske@catorruma.com

Director .....Kate Allen.....kallen@caveoeng.com

Director .....Dave Rodenberg.....drodenberg@long.com





# PRESIDENT'S MESSAGE



Welcome back Rocky Mountain ASHRAE members! I am excited to be your incoming president this year and I am proud to be following such a distinguished group. I want to thank David Rodenberg our past president for his outstanding coordination of the ASHRAE National Summer meeting held in June here in Denver and for all his work last year at the local level to make it fun and productive for all!

I hope all of our members will take an opportunity to visit our local website at [www.rockymtnashrae.com](http://www.rockymtnashrae.com) to familiarize themselves with the committees that we are responsible for and what they do. Depending on how well each committee is staffed and organized depends on how well we do at our Region IX Convention of Regional Chairs (CRC). This August we traveled to Sioux Falls, SD. Of note, Dave Olson was sworn in as the acting Director of Regional Chairs (DRC). Large and in charge is the phase I think best describes how I feel our region will be represented. Lee Burgett our Society President was on hand to discuss sustainability of ASHRAE and how we need to focus on raising awareness of ASHRAE at the local and National level to create interest with those interested in coming into our industry.

Brian Lynch is diligently working to establish informative and interesting programs this year and as always this is your society so any outstanding ideas or innovative tour ideas would be greatly appreciated by contacting either Brian or myself.

Without the support and input of our members, our chapter would not be as successful as it has been in the past. All of us on the Board of Governors (BOG) are always looking for input to do our jobs better. If you have any comments regarding how things are done at the local or society level, committee involvement, meeting location and time, or any other ideas about ASHRAE do not hesitate to contact me or any member of the BOG.

Thanks you for supporting your Rocky Mountain ASHRAE Chapter and remember that this is a volunteer organization, so I look forward to hearing from those members interested in participating to continue to maintain the level of excellence of our chapter into the future. I look forward to seeing everyone next Wednesday at the Wynkoop Brewery!

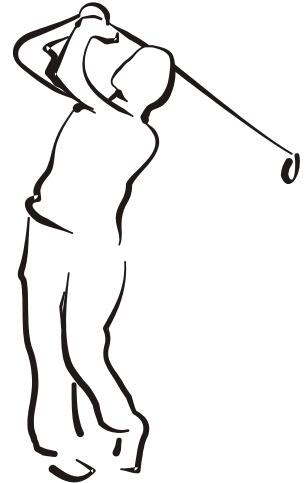
John D. Stumpf  
[john.stumpf@york.com](mailto:john.stumpf@york.com)  
President, Rocky Mountain Chapter ASHRAE





## 2005 ASHRAE Golf Tournament

Thank you to all of those who participated in the 2005 Rocky Mountain ASHRAE Golf Tournament at Hiwan in Evergreen. The tournament was our most successful in a number of years. We raised \$7,244.25 that goes in to the Rocky Mountain ASHRAE Scholarship Fund. This fund helps our Chapter award four \$1,000.00 scholarships every November to students from area Universities that show an interest in our Industry.



We would also like to recognize those Companies that sponsored holes and contributed additionally to the fund. Thank You ABS Consultants, Blender Products, Inc., Braconier Plumbing & Heating, Burch Associates, Carrier West, Cator Ruma & Associates, CFM Company, D.L. Adams Associates, Inc., Engineered Products Company, Long, McNevin Company, MKK, Trane and York International.

The Rocky Mountain ASHRAE Scholarship Fund is a Merrill Lynch account managed with the help of Kraig Haynes. Its present value is \$57,268.00 and this years golf tournament will put is at or near the point where it will be "self-sustaining" so that we can award the scholarships out of the accounts earnings each year.



# ASHRAE HISTORY



The first commercially successful mechanical refrigeration and air conditioning system of the world was designed and installed by Dr. John Gorris of Apalachicola, Florida in 1844. With his own equipment, Dr. Gorris made ice packs for yellow fever patients being treated in his hospital and air-cooled their rooms. He is rightfully named the father of commercial mechanical refrigeration and air conditioning.



## ANNOUNCEMENTS



### ***NREL Engineers Earn Awards***

DENVER Nicholas Long is the recipient of the Willis H. Carrier Award, which is given to an ASHRAE member 32 years of age or younger for presenting an outstanding paper at a Society meeting.

The paper, *Consumptive Water Use for U.S. Power Production*, also receives an ASHRAE Poster Presentation Award, given to peer-reviewed technical papers with the best visual and technical information presented at Society meetings. It was co-authored by Paul Torcellini, Ph.D., P.E., and Ronald Judkoff.

Evaporative cooling systems have been criticized for their water use and acclaimed for low energy consumption. To determine the overall effectiveness of cooling systems, both water and energy should be considered. However, data are needed to compare the amount of energy used at the site to the amount of water used at the power plant. This paper presents a study of power plants and their water consumption to effectively analyze evaporative cooling systems. From this information, different types of cooling systems can be compared for relative water consumption.

Long is a staff engineer, and Torcellini is a senior engineer, National Renewable Energy Laboratory, Golden, Colo.; and Judkoff is director, Buildings and Thermal Systems Center, National Renewable Energy Laboratory, Golden, Colo.





# ANNOUNCEMENTS



## Boulder Engineer Receives ASHRAE Distinguished Service Award

DENVER Mark McLinden, Ph.D., received a Distinguished Service Award from the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) at its 2005 Annual Meeting held here June 25-29.

The Distinguished Service Award salutes members of any grade for giving freely of their time and talent on behalf of the Society. The honor recognizes participation in chapter, regional and Society activities.

McLinden is a chemical engineer, physical and chemical properties division, National Institute of Standards and Technology (NIST), Boulder, Colo.

His contributions to ASHRAE primarily are in the area of refrigerant properties. With the signing of the Montreal Protocol in 1987, the refrigeration industry was faced with replacing the familiar, but ozone-depleting CFCs and HCFCs. The alternatives were largely unknown. He coauthored an *ASHRAE Journal* article in 1987, which examined the inherent tradeoffs among the characteristics desired of a refrigerant and considered the alternatives in a rational way based on the molecular structure. It concluded that the then-new HFCs were among the best candidates.

He has served on TC 3.1, Refrigerants and Secondary Coolants, continuously since 1986, including two terms as chair. He was a reviser for the Handbook of Fundamentals chapter *Thermophysical Properties of Refrigerants* from 1993 to 2005. With the many new refrigerants introduced during this period, extensive revisions were required. He also served on the committee responsible for ASHRAE Standard 34.

He was the primary liaison between ASHRAE and NIST, where a major program on the properties of the alternative refrigerants was underway from the late 1980s through the 1990s.

Through his committee assignments and other ASHRAE interactions, he took back to NIST the needs and concerns of ASHRAE members. These were incorporated into the research projects at NIST, for which he was technical manager and/or principle investigator. The results were reported back to ASHRAE in seminars, symposium papers, Handbook revisions, and through the NIST REFPROP database.





## Golden Engineer Earns ASHRAE Crosby Field Award

DENVER Ali Jalalzadeh-Azar, Ph.D., P.E., is the recipient of the Crosby Field Award given by the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) at the Society's 2005 Annual Meeting held here June 25-29.

The award is for the highest rated paper presented at a Society meeting. It is named for Presidential Member Crosby Field, whose ideas and hard work helped shape the industry.

Jalalzadeh-Azar's paper, *A Comparison of Electrical and Thermal-Load Following CHP Systems*, was judged to be the best paper presented before the Society in 2004. It also receives an ASHRAE Poster Presentation Award, given to peer-reviewed technical papers with the best visual and technical information presented at Society meetings.

Jalalzadeh-Azar is a senior engineer, National Renewable Energy Laboratory, Golden, Colo.

Realization of the full benefits of implementing the combined heat and power (CHP) concept in buildings hinges upon optimum CHP system integration, sizing and operation in parallel with, or independent of, the electrical utility grid. This realization necessitates assessment of the appropriate CHP design/operation possibilities and selection of the best candidate for a given application. Electrical- and thermal-load-following CHP models are among such candidates.

The paper performs a thermodynamic analysis on a thermal-load-following combined heat and power (CHP) system and compares the results with those of a previously studied grid-independent, electrical-load-following model.



# ANNOUNCEMENTS



## **ASHRAE IAQ 2007 Examines Healthy, Sustainable Buildings**

ATLANTA - Healthy, sustainable buildings are those that create high quality indoor environments while minimizing their impacts on the outdoor environment.

But achieving both can be a challenging goal.

Guidance on how to do so will be presented at the American Society of Heating, Refrigerating and Air-Conditioning Engineers' (ASHRAE) conference, IAQ 2007 Healthy and Sustainable Buildings, which will be held Oct. 15-17, 2007, at Baltimore's Inner Harbor, Baltimore, Maryland.

"The issues of healthy and sustainable buildings are cyclical and interdependent," Lawrence J. Schoen, P.E., chair of the conference said. "Buildings not only impact the indoor environment but they have an impact on the outside environment. Our goal in creating healthy buildings should be to create indoor environments where people are healthy and productive but that minimize impact on the environment."

The conference will emphasize the measured performance of healthy and sustainable buildings and practical methods for their design, construction, operation and maintenance, according to Schoen.

For more information, contact ASHRAE Technical Services at [IAQ2007@ashrae.org](mailto:IAQ2007@ashrae.org) or [www.iaq2007.org](http://www.iaq2007.org).







# ANNOUNCEMENTS



## ***Professional Development Course ADVANCED SEMINAR***

**Practical Guidance from the Experts on Prevention, Sampling Methods, Medical and Legal  
Impacts of Mold**

**Friday September 16, 2005 (8:00 am to 5:00pm)  
Golden Community Center, • 1470 10th Street, Golden Colorado**

**Registration:** <http://www.aiha-rms.org>

**Cost:** Early bird: \$150, after August 19<sup>th</sup> \$195, Students \$30 and \$50

**Food:** Continental breakfast and lunch will be provided.

**Credits:** CM = 1.0    COC = 0.5    CLE = 8    CEU = 0.5

**Objectives:** This seminar provides cutting edge information on the effects mold has on health and expands our understanding of the impacts presented by mold. The format will include informational presentations by experts in their respective fields. Topics include prevention, best sampling practices, remediation, health effects, medical aspects, legal ramifications, and status of litigation. Attendees will have the opportunity to ask questions of the experts. Bring your burning questions.

### **Who Should Attend?**

- Industrial Hygienists
- Environmental Health and Safety Professionals
- Attorneys
- Building/Facilities Owners and Managers
- Real Estate Professionals
- Occupational Physicians

### **Presentation Will Cover**

- Best current practices for assessment, sampling and identification, of microbial contamination.
- Recent research by NIOSH investigating dose-response to fungal exposures.
- The latest research regarding medical investigations and health effects of mold exposures.
- Due diligence: what should architects/builders and building managers be doing to prevent mold problems from occurring?
- Current legal theories used in litigation of mold cases.

### **Scheduled Presenters:**

Mr. Al Draper, Director, LVI Services, Inc., Shawnee, OK

Mr. Mark Hodgson, Director, Indoor Environmental Quality, Clayton Group Services, Edison, NJ

Mr. Christopher McDonald, Esq., Shook, Hardy, & Bacon L.L.P., Kansas City, MO

Dr. Elena Page, MD, MPH, NIOSH Hazard Evaluations and Technical Assistance Branch

Dr. Karin Pacheco, MD, National Jewish Medical and Research Center, Denver, CO

Dr. Doug Rice, PhD, Laboratory Director, CSU, Ft. Collins, CO

Sponsored by the American Industrial Hygiene Association, Rocky Mountain Section





# EMPLOYMENT LISTINGS



Position: Preconstruction Engineer  
Company: U.S. Engineering Company  
Web Site: [www.usengineering.com](http://www.usengineering.com)  
Main Phone: 303-964-8060  
Fax: 303-964-8063  
Address: 729 S.E. 8<sup>th</sup> St., Loveland, CO 80537  
Contact: Dennis Simonich  
Contact Phone: 303-964-8060  
Contact Email: [dsimonich@usengineering.com](mailto:dsimonich@usengineering.com)

## More Info:

**Preconstruction Project Engineer** U.S. Engineering Company is seeking to hire a preconstruction project engineer for a permanent position in the Colorado Region. U.S. Engineering Company is one of Colorado's leading mechanical contractors providing high quality piping, plumbing, and sheetmetal services. Degree in mechanical engineering or architectural engineering required. Entry level up to 2 years experience in mechanical consulting engineering preferred. Position includes but not limited to: Conceptual & schematic level systems design of plumbing, piping, & HVAC systems. Conceptual estimating and value engineering. Proposal preparation and presentation. Candidate must have good communication skills. Salary & benefits competitive. If interested, please contact Dennis Simonich 303-964-8060. U.S. Engineering Company is an equal opportunity employer. Visit our website at [www.usengineering.com](http://www.usengineering.com)

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Position(s): **Engineer and Sales Account Manager**  
Company: Setpoint Systems Corp.  
Fax: 303.733.2333  
Address: 2680 S. Platte River Dr.  
Denver, CO 80223  
Contact Email: [service@setpointsystems.com](mailto:service@setpointsystems.com)

## More Info:

Engineers/HVAC/Fire Alarm

Setpoint Systems Corp., an award-winning, growing 22 year old system integration firm has immediate openings for Jr. and Sr. Engineers to design control systems for HVAC, Card Access, CCTV, and Fire Alarm. Position requires at least 3 years of experience and a good working knowledge of AutoCAD. Must have good organizational skills and be a self starter.

Account Manager (Sales)

Seeking an individual and a leader with analytical, competitive, presentation and organizational skills. Position requires at least 3 years of experience in HVAC, Access, CCTV, & Fire Alarm. Must be a self starter.





# EMPLOYMENT LISTINGS



Position(s): Sr. Electrical Engineer, PE registered in CO  
Company: Caveo Consulting Engineers  
Main Phone: 720-200-5955  
Fax: 720-200-5530  
Address: 6143 S. Willow Drive, Ste. 405, Englewood, CO 80111  
Contact: Kate Allen  
Contact Phone: 720-200-5955  
Contact Email: [kallen@caveoeng.com](mailto:kallen@caveoeng.com)

## More Info:

**We have an IMMEDIATE need for a senior Electrical Engineer.** Caveo is a growing mechanical/electrical consulting engineering firm dedicated to serving the Healthcare communities in Colorado and the Carolinas. Caveo specializes in the design of power, communication, lighting, fire alarm, low voltage, HVAC, plumbing, and fire protection systems for Healthcare facilities.

We work directly for building Owners or as a consultant to other design professionals for evaluating, planning and designing building and campus systems. We pride ourselves on developing long-term relationships with facility Owners and as their strategic partner strive to not only satisfy their technical and functional needs but also contribute to the client's overall business goals. We specialize in renovation of existing facilities and also provide MEP design for new construction. Our office is equipped with the latest computer technology and design software to allow our design professionals to work efficiently.

The ideal candidate to join our team will:

- Have a Bachelor of Science Degree (minimum) in electrical engineering or architectural engineering with an emphasis in electrical systems design.
- Be a licensed professional engineer in Colorado, or able to attain licensure.
- Have at least 10 years electrical consulting engineering experience in the design of electrical systems for Healthcare and/or similar facilities.
- Demonstrated success in project and client management.
- Demonstrated success in project sales, a plus.
- Possess good writing and communication skills. Microsoft Office proficiency required.

If you are self motivated, energetic and interested in an Opportunity for potential future ownership in a growing firm, dedicated exclusively to the Healthcare market, then we encourage you to contact us.





# EMPLOYMENT LISTINGS



Position(s): **Mechanical HVAC Engineer**  
Company: CH2M HILL  
Web Site: [www.ch2m.com](http://www.ch2m.com)  
Main Phone: (303) 771-0952  
Address: 9191 S. Jamaica St. Englewood, CO 80112  
Contact: Tony Moell  
Contact Phone: 530-229-3444  
Contact Email: [tmoell@ch2m.com](mailto:tmoell@ch2m.com)

## More Info:

CH2M HILL is an employee-owned, multinational firm providing engineering, construction, operations, communications, security, environmental, and related services to public and private clients in numerous industries on six continents. CH2M HILL offers integrated services that help our clients take an infrastructure project from concept to reality. Our firm is structured to leverage our collective knowledge, allowing us to satisfy each client's unique needs and deliver results. We employ over 14,500 in 200 offices worldwide.

## Qualifications:

Successful candidate will assist senior engineer in design of HVAC and plumbing systems in the water/wastewater industry, military facilities, telecommunications, offices and laboratories. Candidate will be responsible to assist senior engineer in large projects and will complete design of smaller projects with limited supervision as lead engineer. Ideal candidate may eventually lead all HVAC design efforts in the Denver office.

BS Mechanical Engineering with minimum 3 to 5 years direct consulting engineering experience in the design, selection, and specifying of equipment for HVAC, plumbing and fire protection systems for large construction projects. AutoCAD or Microstation experience desired. Experience with Carrier or similar, building HVAC loads modeling. Working knowledge of Uniform and International Mechanical, Plumbing and Fire Codes. Construction experience and/or system startup a plus. Some experience with coordination with local building departments. Good communication skills to allow project coordination with team members assigned to several offices. Experience with coordinating electrical and control requirements with other discipline engineers. Ability to multitask and to work on fast paced design projects. Ability to pass EIT and PE within 3 years required. Position located in Englewood, CO and will be required to travel to other CH2M HILL offices for temporary assignment.

**Please Apply online at [www.ch2m.com](http://www.ch2m.com) Go to careers and apply to requisition 8605BR, or send your resume to [careers@ch2m.com](mailto:careers@ch2m.com) you must reference 8605BR for proper routing**





# EMPLOYMENT LISTINGS



Position(s): Project Engineer in Salt Lake City, Utah or San Francisco, California  
Company: Nexant, Inc.  
Web Site: [www.nexant.com](http://www.nexant.com)  
Main Phone: (415) 369-1000  
Fax: (415) 369-9700  
Address: 101 Second Street, 11<sup>th</sup> Floor  
San Francisco, CA 94105-3672

Contact: Jonathon Kiyoi  
Contact Phone: (415) 369-1000  
Contact Email: [jobs@nexant.com](mailto:jobs@nexant.com)

More Info: Nexant, Inc. has an immediate opening for two experienced Project Engineers; one in Salt Lake City, Utah and another in San Francisco, California. The successful candidates will be responsible for providing technical engineering support for Nexant's Energy Systems Management unit. Specific responsibilities will include: performing energy engineering services for utility and end-use clients, reviewing electric energy efficiency and recommissioning projects, conducting on-site field inspections, installing field monitoring equipment, conducting investment grade audits, and other related tasks.

## **The ideal candidate will possess:**

- Bachelor or Master's degree in mechanical engineering
- Minimum of 5 years of related engineering experience
- Strong background in building systems engineering - particularly HVAC systems, including design, commissioning, and analysis experience
- Hands-on experience with mechanical, electrical and control systems
- Commercial building energy auditing experience
- Industrial process knowledge and experience is a plus
- EIT or FE certification, PE license is preferred
- Proficient DOE2 modeling capabilities also a plus
- Excellent analytical, written communication and interpersonal skills

Interested applicants should send a cover letter listing your preferred location (Salt Lake City or San Francisco), salary requirements, and resume to [jobs@nexant.com](mailto:jobs@nexant.com) with the subject "ESM Project Engineering Position."

Nexant, Inc. is a leading provider of experience-based management and technology consulting services and technology solutions to electric utilities, energy producers, petroleum and chemical companies and energy end-users in all sectors. We provide competitive salaries, a comprehensive benefits package, a 401k retirement plan, and three weeks paid vacation per year.

Nexant, Inc. ([www.nexant.com](http://www.nexant.com)) is an equal opportunity employer and encourages workforce diversity. We welcome applications from all qualified candidates.





# EMPLOYMENT LISTINGS



Position(s): District Sales Manager  
Company: Belimo Aircontrols USA  
Web Site: [www.belimo.com](http://www.belimo.com)  
Main Phone: 203-791-9915  
Fax: 203-749-3857  
Address: 43 Old Ridgebury Rd., Danbury, CT 06813  
Contact: Luann Marra  
Contact Phone: 203-749-3327  
Contact Email: [luann.marra@us.belimo.com](mailto:luann.marra@us.belimo.com)

More Info:

Belimo Aircontrols USA is the leading manufacturer of electronic damper actuators and control valves for HVAC applications. We are looking for a District Sales Manager responsible for the successful sale of Belimo products within the geographic area assigned, (currently Colorado, Wyoming, Montana and New Mexico) based on qualitative and quantitative objectives in the Contracting Business Department. Candidates must have proven track record in a sales and marketing position, and 5 years activity in the HVAC industry. We offer a competitive salary and benefits package.

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Position: **Piping Detailer/Designer**  
Company: Trautman & Shreve, Inc.  
Web Site: [www.trautman-shreve.com](http://www.trautman-shreve.com)  
Main Phone: 303-295-1414  
Fax: 303-295-0324  
Address: 4406 Race Street, Denver, CO 80216  
Contact: Personnel Department  
Contact Phone: 303-295-1414

More Info:

**Qualifications:**

- Minimum 5 years experience in routing, coordination, and detailing of piping for HVAC or plumbing systems for hospitals, labs, commercial office buildings, etc.
- Proficient in Auto CAD 2000 or higher.
- Minimum 1year experience working with 3D-CAD software (Quickpen 3D pipe designer strongly preferred).
- Ability to create 3D-coordinated shop drawings in a multi-discipline environment.
- Familiarity with isometric and fabrication drawings.
- Exposure to Navis Works viewing and collision check software.
- Committed to meeting short-duration schedules.
- A proven record of accomplishment and verifiable references are required.

Please fax resumes to the number listed above.





# EMPLOYMENT LISTINGS



Position(s): **Mechanical Engineer, Mechanical Engineer Intern**  
Company: The RMH Group, Inc.  
Web Site: [www.rmhgroup.com](http://www.rmhgroup.com)  
Main Phone: 303 239 0909  
Fax: 303 312 4609  
Address: 12600 W Colfax Ave Suite A400  
Lakewood CO 80215  
Contact: Jill Patterson  
Contact Phone: 303 239 2761  
Contact Email: [jpatterson@rmhgroup.com](mailto:jpatterson@rmhgroup.com)

The RMH Group is a mechanical/electrical consulting engineering firm specializing in HVAC design for sustainable buildings. RMH is an Equal Opportunity Employer.

Mechanical Engineer Qualifications: ME/AE with 2-5 years HVAC design experience, energy modeling experience, and AutoCAD. LEED accreditation is a plus.

Mechanical Engineer Intern Qualifications: Minimum sophomore level ME/AE student with AutoCAD and some knowledge of and/or experience with HVAC design. Energy modeling experience desired.

---

Position: **Mechanical Engineer, Mechanical Designer**  
Company: Cator, Ruma & Associates  
Web Site: [www.catorruma.com](http://www.catorruma.com)  
Main Phone: 303.462.8438  
Fax: 303.233.3701  
Address: 1550 Dover Street, Suite 2  
Denver, CO 80215  
  
Contact: human resources  
Contact Phone: 303-974-1219  
Contact Email: [cra@catorruma.com](mailto:cra@catorruma.com)

**More Info:**

Cator, Ruma & Associates is a mechanical and electrical consulting engineering firm that has enjoyed an excellent reputation for over 45 years. We are seeking a few experienced engineers/designers to join our team. Candidates should have a minimum of 5 years experience in commercial /institutional mechanical systems design. We can offer you an excellent salary, fully paid major medical, 401K, flex time and Friday afternoons off. Fax your resume, e-mail us, or visit our website at [www.catorruma.com](http://www.catorruma.com).







# EMPLOYMENT LISTINGS



Position: **Project Design Engineer**  
Company: Design Mechanical  
Web Site: [www.comfortsystemsusa.com](http://www.comfortsystemsusa.com)  
Main Phone: 303-449-2092  
Fax: 303-449-8739  
Address: 168 CTC Blvd, Suite D  
Louisville, CO 80027

Contact: Rich Bengé  
Contact Phone: 303-661-1720  
Contact Email: [rbenge@comfortsystemsusa.com](mailto:rbenge@comfortsystemsusa.com)

## More Info:

Design Mechanical is a full service design/build mechanical contractor with in-house design services that support our construction efforts. Our main office is in Louisville with satellite offices in Eagle and Telluride Colorado. We are seeking a project design engineer to work in our Louisville engineering department. The ideal candidate would have a minimum of 3 to 5 years of experience in designing commercial HVAC and plumbing systems within a design/build environment. PE license is a plus but not a requirement. Excellent benefit package. Salary commensurate with experience. Please send resume and references to Rich Bengé at the above mailing or email address.







# MEMBERSHIP PROMOTION



This edition of "The Membership Promotion Page" is asking for your help to increase the number of people who are Affiliate and Associate Members of ASHRAE.

Item 1 addresses the RMC members who pay local dues, receive chapter email and attend monthly meetings, but are not society members. I am asking these people to take the next step and join ASHRAE. Being a member of the chapter is not the same as being a member of society, and I am happy to share with you the benefits society members receive.

Item 2 addresses new member recruitment. Please forward the names of your peers who have questions about joining ASHRAE. My contact information is listed below.

1. Rocky Mountain Chapter members who are not society members will receive a phone call encouraging them to complete the society membership application and mail it with the annual dues thus becoming an Affiliate or Associate Member. More on membership grades next month, or read ahead at [www.ashrae.org](http://www.ashrae.org).

If you are unsure what the status of your society membership is, please contact me and I will promptly answer this or any of your membership questions.

2. ASHRAE is actively seeking new members from the following fields:

- o Environmental Health
  - Industrial Hygienists
  - OSHA Inspectors
  - Hospital Plant Engineers
  - Hospital and health service consultants
- o Indoor Air Quality
  - Building Owners and Agents
  - Control Manufacturers
  - Control Contractors
  - Filter Manufacturers and Agents
  - Clean Room Manufacturers
- o Energy
  - Utilities
  - Energy Engineers
- o Food Technologist and related areas
  - Refrigeration engineers and contractors
  - Grocery Chain Engineers
  - Plant engineers
- o Construction Management
  - Design-build mechanical contractors
  - Test and Balance and Commissioning Contractors

Contact me if any of your peers have questions about joining ASHRAE. An online membership form is available at [www.ashrae.org](http://www.ashrae.org) if they have no questions and want to join without receiving my telephone call!

Next month's article will discuss membership levels, transferring Student Members, and how to reactivate your closed or resigned society membership.

Larry Hodgins, Membership Promotion Chair  
303.886.5577 • [membership@rockymtnashrae.com](mailto:membership@rockymtnashrae.com)





NAME: \_\_\_\_\_ , \_\_\_\_\_ , \_\_\_\_\_  
 (LAST) (FIRST) (MI)

STATUS: RENEWAL \_\_\_\_\_ NEW MEMBER \_\_\_\_\_ ADDRESS CHANGE \_\_\_\_\_

PLEASE CIRCLE PREFERRED MAILING ADDRESS:

HOME ADDRESS

BUSINESS ADDRESS

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

PHONE \_\_\_\_\_

PHONE \_\_\_\_\_

email \_\_\_\_\_

I WOULD LIKE TO BE CONTACTED ABOUT SERVING ON ONE OF THE FOLLOWING COMMITTEES OR FUNCTIONS (PLEASE CIRCLE).

- |                       |                                 |                     |
|-----------------------|---------------------------------|---------------------|
| A. MEMBERSHIP         | H. RESEARCH FUND PROMOTIONS     | O. NEWSLETTER       |
| B. ROSTER             | I. MONTHLY MEETING PROGRAMS     | P. SOCIAL COMMITTEE |
| C. MEETING ATTENDANCE | J. PUBLICITY                    |                     |
| D. EDUCATION          | K. LADIES NIGHT                 |                     |
| E. GOLF               | L. COLORADO ENGINEERING COUNCIL |                     |
| F. CHAPTER HISTORIAN  | M. GENERAL (COMMITTEE HELP)     |                     |
| G. TECHNICAL SEMINARS | N. ENERGY COMMITTEE             |                     |

PLEASE MAIL THIS INVOICE AND YOUR CHECK FOR \$35.00 (PAYABLE TO **ROCKY MOUNTAIN CHAPTER ASHRAE**) TO THE FOLLOWING:

Lawrence J. Hodgins, PE  
 Empire Gas & Electric Equipment Company  
 4900 Osage Street #100, Denver CO 80221  
 303.886.5577  
 membership@rockymtnashrae.com



## FIRST CLASS

Chapter may not act for Society. Expressions,  
opinions, and comments within this newsletter should  
not be taken as those of the Chapter or Society.

Rocky Mountain Chapter of ASHRAE  
c/o Justin Dunkin  
CFM Company  
1495 S. Platte River Dr.  
Denver, CO 80223  
303-607-4444



## ACTIVITIES CALENDAR



For membership info or change of address contact: Larry Hodgins • Empire Gas • [lhodgins@empiregas.com](mailto:lhodgins@empiregas.com)

September 7, 2005 .....The Air Side of Air Handling Units  
October 5, 2005 .....TBD  
November 2, 2005 .....TBD  
December 7, 2005 .....TBD  
January 4, 2006 .....TBD  
February 1, 2006.....TBD  
March 1, 2006 .....TBD  
April 5, 2006.....TBD

Visit the new Rocky Mountain ASHRAE website:

[www.rockymtnashrae.com](http://www.rockymtnashrae.com)



NEWSLETTER OF THE ROCKY MOUNTAIN CHAPTER  
AMERICAN SOCIETY OF HEATING, REFRIGERATING, AND AIR-CONDITIONING ENGINEERS, INC.

Volume 47, Number 2

OCTOBER 2005

Editor: Justin Dunkin

**Visit the new Rocky Mountain ASHRAE website:  
[www.rockymtnashrae.com](http://www.rockymtnashrae.com)**

|                  |                                                                                       |              |                                                                               |
|------------------|---------------------------------------------------------------------------------------|--------------|-------------------------------------------------------------------------------|
| <b>Date:</b>     | October 5, 2005                                                                       | <b>Cost:</b> | Rocky Mtn Chapter Members-\$25*<br>*With Reservations Made Before Monday Noon |
| <b>Dinner</b>    | Wynkoop Brewing Company                                                               |              | Guests, Non-members or Without Reservation - \$30                             |
| <b>Location:</b> | 1634 18th St.<br>Denver, CO 80202<br>(Downtown, Corner of 18 <sup>th</sup> & Wynkoop) | <b>RSVP:</b> | <b>Jeremy Hollands</b><br>E-mail: JDH@catorruma.com                           |
| <b>Time:</b>     | 5:30 Social Hour (Wynkoop)<br>6:30 Dinner (Wynkoop)<br>7:00 Program Begins (Wynkoop)  |              |                                                                               |



## OCTOBER PROGRAM



### **Revisions to ASHRAE 62.1-2004** **(Standard for Ventilation for Acceptable Indoor Air Quality)**

This month we are pleased to welcome Mr. Dave Kahn as our speaker. Dave's presentation will cover ASHRAE 62.1 Revisions, the most significant new change to any of the ASHRAE standards. It has been revised and reissued as 62.1-2004. The way minimum outdoor air is calculated is different. It is no longer 20 CFM per person. There is a CFM per person rate and a CFM per square foot rate. These two ventilation rates are added together to get the minimum required outdoor air quantity. Just when you thought you had it all figured out!

Dave Kahn is a project manager with The RMH Group, Inc., with over 20 years experience designing HVAC and control systems for a wide variety of facilities and 10 years working for a controls contractor. Dave has served as chair of ASHRAE Technical Committee 1.4, Control Theory and Application, and is a member of SGPC 13 "Specifying Direct Digital Control Systems". He is an ICC plans examiner for both the Uniform and International Building Codes

See you at the Wynkoop!  
Brian Lynch  
VP, Programs  
Rocky Mountain Chapter of ASHRAE



# ROCKY MOUNTAIN ROSTER



President .....John Stumpf.....john.stumpf@york.com

President Elect.....Kevin Parrot .....KevinP@trinity-mechanical.com

Vice President.....Brian Lynch .....brian.lynch@york.com

Secretary .....Scott Martin.....smartin@rmhgroup.com

Treasurer .....Jeremy Hollands .....jhollands@catorruma.com

Newsletter Editor .....Justin Dunkin .....justind@cfmcompany.com

Membership .....Larry Hodgins.....lhodgins@empiregas.com

Refrigeration .....Dave Rodenberg.....drodenberg@long.com

Historian.....Steve Maxson .....smaxson@sbengr.com

Technology Transfer .....Ken Urbanek.....kurbanek@mkkeng.com

Resource Promotions .....Kevin Parrot .....KevinP@trinity-mechanical.com

Web Master .....Kyle Manske .....kmanske@comfortsystemsusa.com

Education Chairman .....Kevin Ainsworth .....kainsworth@mcgrath-inc.com

Director .....Mark Jelinske .....mjelinske@catorruma.com

Director .....Kate Allen.....kallen@caveoeng.com

Director .....Dave Rodenberg.....drodenberg@long.com





# PRESIDENT'S MESSAGE



Hello ASHRAE members,

Well a couple of things we learned at last months meeting are exhaust fans suck and return fans blow! On a more serious note, I would like to say thank you to John Kettler for taking the time to help us understand about exhaust and return fans, outdoor air measurements, and opposed blade mixing sections. The general consensus was everyone learned a little something valuable.

I was pleasantly surprised by the number of people that made it to the meeting last month and I strongly encourage all those that came to be sure and RSVP so everyone gets dinner and a place to sit. I hope that all of you will continue to participate and encourage others to come along. Contact Jeremy Hollands at [JDH@catorruma.com](mailto:JDH@catorruma.com) in order to RSVP.

Well, it's October and that means Oktoberfest! Please join us at the Stone House in Lakewood on Friday, October 7<sup>th</sup> from 3:00 to 6:00 PM for our annual celebration. As always Kevin Ainsworth ensures that the bratwurst is basted in the finest of brew. At times there is even some left over for those interested in washing down those tasty bratwurst. All proceeds for this event go directly to ASHRAE Research.

Thank you for supporting your Rocky Mountain ASHRAE Chapter and remember that this is a volunteer organization, so I would like to hear from those members interested in participating to maintain this level of excellence into the future. I look forward to seeing everyone next Wednesday at the Wynkoop Brewery!

John D. Stumpf

[john.stumpf@york.com](mailto:john.stumpf@york.com)

President, Rocky Mountain Chapter ASHRAE







# SEPTEMBER MEETING OVERVIEW



In case you missed the last ASHRAE Meeting, the *Things We Learned* were:

1. Not everyone that came RSVP'd and we came up short on food.
2. Return Fans systems generally consume less horsepower than Relief/Exhaust systems if return static pressure loss is high and the system operates with a high percentage of outdoor air.
3. Relief Exhaust systems are easier to control than Return/Exhaust systems.
4. Two ways to control minimum outdoor airflow.
5. Fan tracking does not provide accurate control for minimum outdoor air flow or building pressurization.
6. Stage outdoor airflow stations if you want to measure from minimum to 100% outdoor airflow.
7. **Sequencing** opposed-blade outdoor air dampers on VAV AHU mixing boxes improves mixing and saves fan horsepower when mixing outdoor air and return air.
8. It is difficult to sense mixed air temperature accurately even with averaging type temperature sensors.



## ASHRAE HISTORY



### Early Use of Ice for Comfort Cooling

Before mechanical refrigeration was wide spread in the United States, ice was the only available source of cooling. Ice was primarily used for keeping food cool and preventing spoilage. However, there are some early accounts of using ice and snow for comfort cooling. In 455 A.D. the Roman Emperor Varius Avitus ordered that mountain snow be brought and formed in mounds in his garden so that “the natural breezes may be cooled.” By the 1800's systems were becoming a little more sophisticated. In 1865 Nathaniel Shaler of Newport, Kentucky was granted a U.S. patent for the air cooling apparatus shown in the schematic below. The patent describes a heat exchanger made with “ice holders” placed in a “tortuous passage” through which room air is blow to cool it. The patent also describes the option for a desiccant to be placed in the air stream to dry the air.

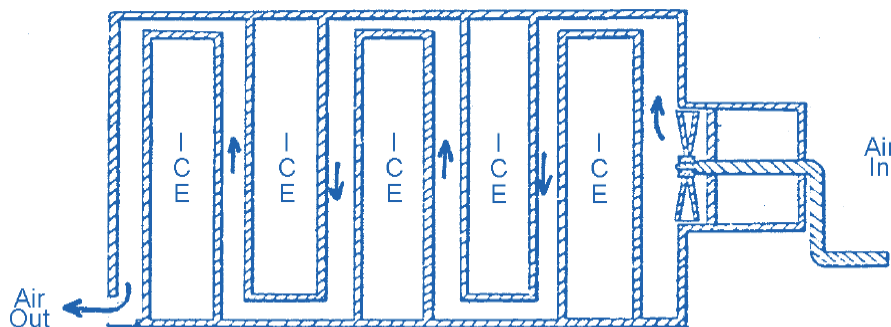


Figure 1: Shaler's patented cooler for ventilating air, 1865.





## The Latest in Technical, Energy, and Government Activities

### Energy Policy Act of 2005

The new Energy Policy Act of 2005 was signed into law on August 8, 2005. Within this new policy are numerous tax incentives including new incentives regarding Energy Efficiency and Conservation with respect to new and existing buildings, some of these are summarized and highlighted below:

Sec. 1331. Energy efficient commercial building deduction. The provision allows a deduction for energy efficient commercial buildings that reduce annual energy and power consumption by 50 percent compared to the American Society of Heating, Refrigerating, and Air Conditioning Engineers (ASHRAE) standard. The deduction would equal the cost of energy efficient property installed during construction, with a maximum deduction of \$1.80 per square foot of the building. In addition, a partial deduction of 60 cents per square foot would be provided for building subsystems.

Sec. 1332. Business credit for new energy efficient homes. Provides credit to eligible contractor for construction of a qualified new energy-efficient home. Credit applies to manufactured homes meeting Energy Star Standards and other homes meeting a 50 percent standard. Credit applies to homes which are purchased after December 31, 2005 and prior to January 1, 2008.

Sec. 1333. Credit for energy efficiency improvements to existing homes. Provision provides a 10 percent investment tax credit for expenditures with respect to improvements to a building envelope. Allows credits for purchases of advanced main air circulating fans, natural gas, propane, or oil furnaces or hot water boilers, and other qualified energy efficient property. Credit applies to property placed in service after December 31, 2005 and prior to January 1, 2008.

Sec. 1336. Credit for qualified fuel cells and stationary microturbine power plants. The provision provides a 30 percent business energy credit for the purchase of qualified fuel power plants for businesses and a 10 percent credit for purchase of qualifying stationary microturbine power plants. Credit applies to periods after December 31, 2005 and before January 1, 2008.

### Energy Design Guide Earns Award from Energy Alliance

ATLANTA ASHRAE has been recognized by a national energy alliance for its “exemplary illustration of and commitment to energy-efficient policy and practice.”

The Alliance to Save Energy has recognized development of Advanced Energy Design Guide for Small Office Buildings with an honorable mention award ... The guide was developed by a committee representing a diverse group of energy professionals drawn from the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE), the American Institute of Architects (AIA), the New Buildings Institute (NBI), and the Illuminating Engineering Society of North America (IESNA) and the U.S. Department of Energy (DOE) ... The guide provides a sensible, hands-on approach to design through use of products that are practical and commercially available as “off-the-shelf” technology from major manufacturers.

For more information on this guide and other great ASHRAE references check out the ASHRAE Bookstore Website at [www.ashrae.org](http://www.ashrae.org) and then click on the link to the Bookstore.







# ANNOUNCEMENTS



## *6th Annual* **ASHRAE Oktoberfest**

**Friday October 7, 2005  
3:00 p.m. to 6:00 p.m.**

**The Stone House**  
*(Estes & Yale in Lakewood)*

We are going to kick-off our new ASHRAE season in style. We want to get our new “Resource Promotion” Campaign off to a fast start. This is our first fund raiser for Resource Promotion of the year. Donations will be accepted. Our local Rocky Mountain Chapter will be picking up the costs for everything for the Oktoberfest.

We will BBQ brats, have chips, salads and of course drinks for everyone! Music will be provided but most important plan to spend a Friday afternoon with friends.

Spouses, children and significant others are encouraged to attend.





# ANNOUNCEMENTS



## ASHRAE Web Site Earns Award of Excellence

ATLANTA - ASHRAE.org, the Web site of the American Society of Heating, Refrigerating and Air-Conditioning Engineers, has earned an award of excellence from the Web Marketing Association.

The association's Standard of Excellence Web Award recognizes the best web sites in a variety of industry categories. Past Standard of Excellence sites include The American Water Works Association, ABC News, and Abercrombie and Fitch.

Judges noted that ASHRAE.org is "easy to navigate and easy to find your contact information." Entries are judged on design, innovation, content, technology, interactivity, copywriting, and ease of use.

The site exceeds 6,000 unique visits per day and hosts 8,000 documents. ASHRAE.org was launched in 1995 to deliver information to the HVAC&R industry, including in-depth technical information, information on Society activities, updates on emerging trends in new technologies, and information on HVAC&R products, companies and organizations.

"ASHRAE.org is designed to make it easy for visitors to find the information they need in order to help fulfill their obligation to their clients and customers as well as to the Society", said David McAlister, ASHRAE's manager of electronic communications. "For Internet professionals to judge our site a Standard of Excellence in web design is encouraging. But the usability and friendliness of a site depends on member feedback and constant study of industry best practices. We see this award as confirmation that we're on the right path".

Services of the site include:

- Discussion boards to enable practitioners to share expertise and opinions in a variety of technical areas.
- Online meetings for committees.
- An interactive membership application form.
- A career services center where members can post resumes and search for jobs.
- E-Newsletters: The HVAC&R Industry, which provides weekly industry updates to subscribers, and Society Connections, which provides discussion forums on technical issues and Society news.

The Web Marketing Association was founded in 1997 to help set a high standard for Internet marketing and corporate Web development on the World Wide Web.





# ANNOUNCEMENTS



## New Faces of Engineering

ASHRAE Members: Are you interested in promoting an outstanding young employee, your company and ASHRAE?

Then I encourage you to enter the *New Faces of Engineering*.

Part of National Engineers Week, Feb. 19-25, the New Faces program highlights the contributions of the industry's newest engineers. Each year, the program culminates with a full-page ad in *USA Today* of the top 16 New Faces. The ad features a photo of the selected young engineers, the name of the company for which they work and a brief description of their contributions.

Within ASHRAE, this same information is used to promote the Society's nominees in *ASHRAE Insights*, in the ASHRAE electronic newsletter, *E-Connections*, and on ASHRAE.org.

To make this program successful, ASHRAE needs the help of its members. We are seeking nominees. Nominees must be under the age of 30, hold an engineering degree, be employed as an engineer for between two and five years, have been involved in projects that significantly impact public welfare or further professional development and growth and be an ASHRAE member.

To nominate young engineers, submit the completed nomination form on ASHRAE.org at [www.ashrae.org/newfaces](http://www.ashrae.org/newfaces). We ask that you submit nominations to ASHRAE by **November 1, 2005**.

The *New Faces of Engineering* strives to promote the accomplishments of young engineers by highlighting their engineering contributions and the resulting impact on society. It is a recognition program, not a competition. Nominees should be able to tie at least one achievement to something the non-engineering community can appreciate.

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## ASHRAE IAQ 2007 Examines Healthy, Sustainable Buildings

ATLANTA - Healthy, sustainable buildings are those that create high quality indoor environments while minimizing their impacts on the outdoor environment.

But achieving both can be a challenging goal.

Guidance on how to do so will be presented at the American Society of Heating, Refrigerating and Air-Conditioning Engineers' (ASHRAE) conference, IAQ 2007 Healthy and Sustainable Buildings, which will be held Oct. 15-17, 2007, at Baltimore's Inner Harbor, Baltimore, Maryland.

"The issues of healthy and sustainable buildings are cyclical and interdependent," Lawrence J. Schoen, P.E., chair of the conference said. "Buildings not only impact the indoor environment but they have an impact on the outside environment. Our goal in creating healthy buildings should be to create indoor environments where people are healthy and productive but that minimize impact on the environment."

The conference will emphasize the measured performance of healthy and sustainable buildings and practical methods for their design, construction, operation and maintenance, according to Schoen.

For more information, contact ASHRAE Technical Services at [IAQ2007@ashrae.org](mailto:IAQ2007@ashrae.org) or [www.iaq2007.org](http://www.iaq2007.org).





# ANNOUNCEMENTS



## **ASHRAE Online Seminars**

**Earn CEUs From Your Desktop.**

### **Registration Fees**

**\$490 Non-Member, \$390 ASHRAE Member**

*Includes \$60 discount*

**Designing Residential Ventilation Systems to Meet ASHRAE Standard 62.2** - October 18, 2005 - This course will provide an overview of fundamental ventilation and IAQ principles as applicable to low-rise residential buildings, including such topics as infiltration, natural ventilation, mechanical ventilation, and source control. [Learn more](#) about this popular standard.

**Introduction to Green Buildings and Sustainable Construction** - October 20, 2005 - This course will present the basic principles related to sustainable construction and green buildings. Included in the course will be a review of the integrated approach to buildings and systems necessary to achieve green/sustainable buildings, developments, and projects. [More information](#) on the Green Building Seminar.

**Complying with Requirements of ASHRAE Standard 62.1-2004** - October 26, 2005 - ASHRAE Standard 62.1-2004 Ventilation for Acceptable Indoor Air Quality contains many changes from previous versions. The new standard incorporates more than 15 recent addenda. [Additional information on 62.1.](#)





# ANNOUNCEMENTS



## Advanced Facilities Engineering Conference and Technical Demonstrations

**Denver Merchandise Mart Expo Hall**

**58<sup>th</sup> Avenue & I-25**

**NOVEMBER 10-11**

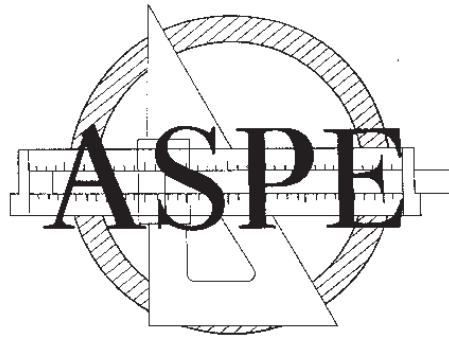
**[www.afec.biz](http://www.afec.biz)**

Advance your skills and knowledge so you are better equipped to manage today's job demands! See exhibits, demonstrations, attend seminars, special events and special keynote by Clint Hurdle, Manager Colorado Rockies. If you are a **consulting engineer- chief engineer- plant engineer- energy engineer- security manager- facility engineer- building facility manager-safety engineer- environmental engineer- consultant- hospital engineer- maintenance director, or property manager**, then this conference is for you!





# ANNOUNCEMENTS



American Society of Plumbing  
Engineers  
Denver Chapter's

## **Table Top Product Show October 19, 2005**

**At the  
Best Western Central  
200 W. 48<sup>th</sup> Avenue  
(I-25 and I-70 Interchange)  
Denver, CO**

**11:00 am to 2:00 pm**

**RAFFLE PRIZES AND FREE LUNCH**

**Go to [www.ASPE.org/Denver](http://www.ASPE.org/Denver)  
For more information**





# EMPLOYMENT LISTINGS



Position(s): HVAC Project Engineer  
Company: The Ballard Group, Inc.  
Main Phone: 303 988 4514  
Fax: 303 988 4517  
Address: 2525 S. Wadsworth Blvd., Suite 200  
Lakewood, CO 80227

Contact: Steve Franz  
Contact Phone: 303 988 4514  
Contact Email: sfranz@theballardgroup.com

The ideal candidate will have a minimum of 4 years HVAC design experience and enjoys working on a wide variety of project types. The Ballard Group is an HVAC design firm with 20 employees. We have been in business since 1978 and work primarily on healthcare, education and fitness center projects.

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Position: Preconstruction Engineer  
Company: U.S. Engineering Company  
Web Site: [www.usengineering.com](http://www.usengineering.com)  
Main Phone: 303-964-8060  
Fax: 303-964-8063  
Address: 729 S.E. 8<sup>th</sup> St.  
Loveland, CO 80537

Contact: Dennis Simonich  
Contact Phone: 303-964-8060  
Contact Email: [dsimonich@usengineering.com](mailto:dsimonich@usengineering.com)

**Preconstruction Project Engineer** U.S. Engineering Company is seeking to hire a preconstruction project engineer for a permanent position in the Colorado Region. U.S. Engineering Company is one of Colorado's leading mechanical contractors providing high quality piping, plumbing, and sheetmetal services. Degree in mechanical engineering or architectural engineering required. Entry level up to 2 years experience in mechanical consulting engineering preferred. Position includes but not limited to: Conceptual & schematic level systems design of plumbing, piping, & HVAC systems. Conceptual estimating and value engineering. Proposal preparation and presentation. Candidate must have good communication skills. Salary & benefits competitive. If interested, please contact Dennis Simonich 303-964-8060. U.S. Engineering Company is an equal opportunity employer. Visit our website at [www.usengineering.com](http://www.usengineering.com)







# EMPLOYMENT LISTINGS



Position(s): Sr. Electrical Engineer, PE registered in CO  
Company: Caveo Consulting Engineers  
Main Phone: 720-200-5955  
Fax: 720-200-5530  
Address: 6143 S. Willow Drive, Ste. 405, Englewood, CO 80111

Contact: Kate Allen  
Contact Phone: 720-200-5955  
Contact Email: kallen@caveoeng.com

**We have an IMMEDIATE need for a senior Electrical Engineer.**

**Caveo** is a growing mechanical/electrical consulting engineering firm dedicated to serving the Healthcare communities in Colorado and the Carolinas. Caveo specializes in the design of power, communication, lighting, fire alarm, low voltage, HVAC, plumbing, and fire protection systems for Healthcare facilities.

We work directly for building Owners or as a consultant to other design professionals for evaluating, planning and designing building and campus systems. We pride ourselves on developing long-term relationships with facility Owners and as their strategic partner strive to not only satisfy their technical and functional needs but also contribute to the client's overall business goals.

We specialize in renovation of existing facilities and also provide MEP design for new construction. Our office is equipped with the latest computer technology and design software to allow our design professionals to work efficiently.

The ideal candidate to join our team will:

- Have a Bachelor of Science Degree (minimum) in electrical engineering or architectural engineering with an emphasis in electrical systems design.
- Be a licensed professional engineer in Colorado, or able to attain licensure.
- Have at least 10 years electrical consulting engineering experience in the design of electrical systems for Healthcare and/or similar facilities.
- Demonstrated success in project and client management.
- Demonstrated success in project sales, a plus.
- Possess good writing and communication skills. Microsoft Office proficiency required.

If you are self motivated, energetic and interested in an Opportunity for potential future ownership in a growing firm, dedicated exclusively to the Healthcare market, then we encourage you to contact us.







# EMPLOYMENT LISTINGS



Position(s): **Mechanical HVAC Engineer**  
Company: CH2M HILL  
Web Site: [www.ch2m.com](http://www.ch2m.com)  
Main Phone: (303) 771-0952  
Address: 9191 S. Jamaica St. Englewood, CO 80112  
Contact: Tony Moell  
Contact Phone: 530-229-3444  
Contact Email: [tmoell@ch2m.com](mailto:tmoell@ch2m.com)

CH2M HILL is an employee-owned, multinational firm providing engineering, construction, operations, communications, security, environmental, and related services to public and private clients in numerous industries on six continents. CH2M HILL offers integrated services that help our clients take an infrastructure project from concept to reality. Our firm is structured to leverage our collective knowledge, allowing us to satisfy each client's unique needs and deliver results. We employ over 14,500 in 200 offices worldwide.

## **Qualifications:**

Successful candidate will assist senior engineer in design of HVAC and plumbing systems in the water/wastewater industry, military facilities, telecommunications, offices and laboratories. Candidate will be responsible to assist senior engineer in large projects and will complete design of smaller projects with limited supervision as lead engineer. Ideal candidate may eventually lead all HVAC design efforts in the Denver office.

BS Mechanical Engineering with minimum 3 to 5 years direct consulting engineering experience in the design, selection, and specifying of equipment for HVAC, plumbing and fire protection systems for large construction projects. AutoCAD or Microstation experience desired. Experience with Carrier or similar, building HVAC loads modeling. Working knowledge of Uniform and International Mechanical, Plumbing and Fire Codes. Construction experience and/or system startup a plus. Some experience with coordination with local building departments. Good communication skills to allow project coordination with team members assigned to several offices. Experience with coordinating electrical and control requirements with other discipline engineers. Ability to multitask and to work on fast paced design projects. Ability to pass EIT and PE within 3 years required. Position located in Englewood, CO and will be required to travel to other CH2M HILL offices for temporary assignment.

**Please Apply online at [www.ch2m.com](http://www.ch2m.com) Go to careers and apply to requisition 8605BR, or send your resume to [careers@ch2m.com](mailto:careers@ch2m.com) you must reference 8605BR for proper routing**





# EMPLOYMENT LISTINGS



Position(s): **Engineer and Sales Account Manager**  
Company: Setpoint Systems Corp.  
Fax: 303.733.2333  
Address: 2680 S. Platte River Dr.  
Denver, CO 80223  
Contact Email: service@setpointsystems.com

## **Engineers/HVAC/Fire Alarm**

Setpoint Systems Corp., an award-winning, growing 22 year old system integration firm has immediate openings for Jr. and Sr. Engineers to design control systems for HVAC, Card Access, CCTV, and Fire Alarm. Position requires at least 3 years of experience and a good working knowledge of AutoCAD. Must have good organizational skills and be a self starter.

## **Account Manager (Sales)**

Seeking an individual and a leader with analytical, competitive, presentation and organizational skills. Position requires at least 3 years of experience in HVAC, Access, CCTV, & Fire Alarm. Must be a self starter.

---

Position(s): District Sales Manager  
Company: Belimo Aircontrols USA  
Web Site: www.belimo.com  
Main Phone: 203-791-9915  
Fax: 203-749-3857  
Address: 43 Old Ridgebury Rd., Danbury, CT 06813

Contact: Luann Marra  
Contact Phone: 203-749-3327  
Contact Email: luann.marra@us.belimo.com

Belimo Aircontrols USA is the leading manufacturer of electronic damper actuators and control valves for HVAC applications.

We are looking for a District Sales Manager responsible for the successful sale of Belimo products within the geographic area assigned, (currently Colorado, Wyoming, Montana and New Mexico) based on qualitative and quantitative objectives in the Contracting Business Department. Candidates must have proven track record in a sales and marketing position, and 5 years activity in the HVAC industry. We offer a competitive salary and benefits package.





# EMPLOYMENT LISTINGS



Position(s): Project Engineer in Salt Lake City, Utah or San Francisco, California  
Company: Nexant, Inc.  
Web Site: [www.nexant.com](http://www.nexant.com)  
Main Phone: (415) 369-1000  
Fax: (415) 369-9700  
Address: 101 Second Street, 11<sup>th</sup> Floor  
San Francisco, CA 94105-3672

Contact: Jonathon Kiyoi  
Contact Phone: (415) 369-1000  
Contact Email: [jobs@nexant.com](mailto:jobs@nexant.com)

Nexant, Inc. has an immediate opening for two experienced Project Engineers; one in Salt Lake City, Utah and another in San Francisco, California. The successful candidates will be responsible for providing technical engineering support for Nexant's Energy Systems Management unit. Specific responsibilities will include: performing energy engineering services for utility and end-use clients, reviewing electric energy efficiency and recommissioning projects, conducting on-site field inspections, installing field monitoring equipment, conducting investment grade audits, and other related tasks.

## **The ideal candidate will possess:**

- Bachelor or Master's degree in mechanical engineering
- Minimum of 5 years of related engineering experience
- Strong background in building systems engineering - particularly HVAC systems, including design, commissioning, and analysis experience
- Hands-on experience with mechanical, electrical and control systems
- Commercial building energy auditing experience
- Industrial process knowledge and experience is a plus
- EIT or FE certification, PE license is preferred
- Proficient DOE2 modeling capabilities also a plus
- Excellent analytical, written communication and interpersonal skills

Interested applicants should send a cover letter listing your preferred location (Salt Lake City or San Francisco), salary requirements, and resume to [jobs@nexant.com](mailto:jobs@nexant.com) with the subject "ESM Project Engineering Position."

Nexant, Inc. is a leading provider of experience-based management and technology consulting services and technology solutions to electric utilities, energy producers, petroleum and chemical companies and energy end-users in all sectors. We provide competitive salaries, a comprehensive benefits package, a 401k retirement plan, and three weeks paid vacation per year.

Nexant, Inc. ([www.nexant.com](http://www.nexant.com)) is an equal opportunity employer and encourages workforce diversity. We welcome applications from all qualified candidates.





# EMPLOYMENT LISTINGS



Position: **Piping Detailer/Designer**  
Company: Trautman & Shreve, Inc.  
Web Site: [www.trautman-shreve.com](http://www.trautman-shreve.com)  
Main Phone: 303-295-1414  
Fax: 303-295-0324  
Address: 4406 Race Street, Denver, CO 80216

Contact: Personnel Department  
Contact Phone: 303-295-1414

## Qualifications:

- Minimum 5 years experience in routing, coordination, and detailing of piping for HVAC or plumbing systems for hospitals, labs, commercial office buildings, etc.
- Proficient in Auto CAD 2000 or higher.
- Minimum 1year experience working with 3D-CAD software (Quickpen 3D pipe designer strongly preferred).
- Ability to create 3D-coordinated shop drawings in a multi-discipline environment.
- Familiarity with isometric and fabrication drawings.
- Exposure to Navis Works viewing and collision check software.
- Committed to meeting short-duration schedules.
- A proven record of accomplishment and verifiable references are required.

Please fax resumes to the number listed above.

---

Position(s): **Mechanical Engineer, Mechanical Engineer Intern**  
Company: The RMH Group, Inc.  
Web Site: [www.rmhgroup.com](http://www.rmhgroup.com)  
Main Phone: 303 239 0909  
Fax: 303 312 4609  
Address: 12600 W Colfax Ave Suite A400  
Lakewood CO 80215  
Contact: Jill Patterson  
Contact Phone: 303 239 2761  
Contact Email: [jpatterson@rmhgroup.com](mailto:jpatterson@rmhgroup.com)

The RMH Group is a mechanical/electrical consulting engineering firm specializing in HVAC design for sustainable buildings. RMH is an Equal Opportunity Employer.

Mechanical Engineer Qualifications: ME/AE with 2-5 years HVAC design experience, energy modeling experience, and AutoCAD. LEED accreditation is a plus.

Mechanical Engineer Intern Qualifications: Minimum sophomore level ME/AE student with AutoCAD and some knowledge of and/or experience with HVAC design. Energy modeling experience desired.





# EMPLOYMENT LISTINGS



Position: **Mechanical Engineer, Mechanical Designer**  
Company: Cator, Ruma & Associates  
Web Site: [www.catorruma.com](http://www.catorruma.com)  
Main Phone: 303.462.8438  
Fax: 303.233.3701  
Address: 1550 Dover Street, Suite 2  
Denver, CO 80215

Contact: human resources  
Contact Phone: 303-974-1219  
Contact Email: [cra@catorruma.com](mailto:cra@catorruma.com)

Cator, Ruma & Associates is a mechanical and electrical consulting engineering firm that has enjoyed an excellent reputation for over 45 years. We are seeking a few experienced engineers/designers to join our team. Candidates should have a minimum of 5 years experience in commercial /institutional mechanical systems design. We can offer you an excellent salary, fully paid major medical, 401K, flex time and Friday afternoons off. Fax your resume, e-mail us, or visit our website at [www.catorruma.com](http://www.catorruma.com).

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Position: **Project Design Engineer**  
Company: Design Mechanical  
Web Site: [www.comfortsystemsusa.com](http://www.comfortsystemsusa.com)  
Main Phone: 303-449-2092  
Fax: 303-449-8739  
Address: 168 CTC Blvd, Suite D  
Louisville, CO 80027

Contact: Rich Bengé  
Contact Phone: 303-661-1720  
Contact Email: [rbenge@comfortsystemsusa.com](mailto:rbenge@comfortsystemsusa.com)

Design Mechanical is a full service design/build mechanical contractor with in-house design services that support our construction efforts. Our main office is in Louisville with satellite offices in Eagle and Telluride Colorado. We are seeking a project design engineer to work in our Louisville engineering department. The ideal candidate would have a minimum of 3 to 5 years of experience in designing commercial HVAC and plumbing systems within a design/build environment. PE license is a plus but not a requirement. Excellent benefit package. Salary commensurate with experience. Please send resume and references to Rich Bengé at the above mailing or email address.





# MEMBERSHIP PROMOTION



Welcome to October's edition of "The Membership Promotion Page." As promised last month, I will discuss membership levels, transferring Student Members, and membership reinstatement.

## **1. Membership levels:** Grade name, description, annual cost, and publications benefits

**Life Member / Life Associate Member** Awarded to individuals who have thirty or more years in ASHRAE and must be at least 65 years of age. The appropriate grade is automatically established by Society with notification to the Chapters. (\$0 annually receives Journal, Insights Handbooks on request)

**Retiree Member** Awarded to individuals who have at least ten years in ASHRAE and must be at least 55 years of age. The member must be fully retired from "active participation in business." (\$20 Annually receives Journal, Insights no Handbook)

**Member** Awarded to individuals who have twelve or more years of qualified industry-related experience. Credit for industry related experience can be earned from any combination of approved education, work experience and professional registration. (\$150 annually receives Journal, Insights and Handbook)

**Associate Member** Awarded to individuals who have less than twelve years of ASHRAE-approved industry experience in the heating, refrigerating, air-conditioning, or ventilating fields. (\$150 annually receives Journal, Insights and Handbook)

**Affiliate Member** ASHRAE's newest grade is an introductory grade for applicants with a general interest in the Society's programs and services. Assignment to this grade is limited to those who are under 30 years of age who are first-time new members. (\$40 annually no Journal, Insights 20% off Handbook)

**Student Member** Must be studying or have an interest in an HVAC&R industry-related field. Eligible students must be participating in an approved course of study in a university, college, junior college, or technical institute. (\$16 annually receives Journal, Insights - \$49 each Handbook volume)

## **2. Student Transfer Program:** Lower cost for the first three years as an Associate Member to as you transition into your career.

First year after graduation: \$16.00

Second year after graduation: \$40.00

Third year after graduation: \$40.00

Please send an email to [students@ashrae.org](mailto:students@ashrae.org), and Society will work directly with you.

## **3. Reinstatement:** You may either reinstate your membership from your last grade held by completing and sending the Society membership form with a check / money order for \$150.00; or you may back pay all your missing years thus receiving "time credit" useful towards your Life Member / Life Associate Member and all back-editions of handbooks.

The back-pay option will require direct intervention from Society, and the back-editions of handbooks will be sent only upon your request.

Larry Hodgins, Membership Promotion Chair

c. 720.939.4094

e. [membership@rockymtnashrae.com](mailto:membership@rockymtnashrae.com) or [larry@acemechanical.com](mailto:larry@acemechanical.com)





## FIRST CLASS

Chapter may not act for Society. Expressions, opinions, and comments within this newsletter should not be taken as those of the Chapter or Society.

Rocky Mountain Chapter of ASHRAE  
c/o Justin Dunkin  
CFM Company  
1495 S. Platte River Dr.  
Denver, CO 80223  
303-607-4444



## ACTIVITIES CALENDAR



For membership info or change of address contact: Larry Hodgins • Empire Gas • lhodgins@empiregas.com

|                  |                                                                                                                            |
|------------------|----------------------------------------------------------------------------------------------------------------------------|
| October 5, 2005  | <b><u>Membership Night</u></b><br><i>Topic: ASHRAE 62.1-2004 Revisions</i>                                                 |
| October 7, 2005  | <b><u>Oktoberfest @ The Stone House 3:00 to 6:00 PM</u></b><br><i>BBQ Brats, Chips, Salad and Drinks for all!!!</i>        |
| November 2, 2005 | <b><u>Student Night &amp; Joint Meeting with SMACNA</u></b><br><i>Topic: LEED For contractors and Consulting Engineers</i> |
| December 7, 2005 | <b><u>Past President's Night</u></b><br><i>Topic: If I knew then, what I know Now</i>                                      |
| January 4, 2006  | <b><u>Refrigeration Night</u></b><br><i>Tentative Topic: Ammonia Refrigeration</i>                                         |
| February 1, 2006 | <b><u>Spouse / Significant Other Night</u></b><br><i>Tentative Topic: Comedy Show</i>                                      |
| March 1, 2006    | TBD                                                                                                                        |
| April 5, 2006    | TBD                                                                                                                        |
| May 3, 2006      | TBD                                                                                                                        |

**Visit the new Rocky Mountain ASHRAE website:**

**[www.rockymtnashrae.com](http://www.rockymtnashrae.com)**





Volume 47, Number 3

**NOVEMBER 2005**

Editor: Justin Dunkin

Visit the new Rocky Mountain ASHRAE website:  
[www.rockymtnashrae.com](http://www.rockymtnashrae.com)

**Date:** November 2, 2005

**Cost:** Rocky Mtn Chapter Members-\$25\*  
\*With Reservations Made Before Monday Noon

**Dinner Location:** SMACNA Training Center  
1515 W. 47<sup>th</sup> Ave  
Denver, CO 80211

Guests, Non-members or Without Reservation - \$30  
Students - \$20

**RSVP:** Carla Pacheco  
E-mail: [smacnaco@rmi.net](mailto:smacnaco@rmi.net)

**Time:** 5:30 Social Hour  
6:30 Dinner  
7:00 Program Begins



## NOVEMBER PROGRAM



### “Today's LEED, Tomorrow's ASHRAE: An Engineers Guide”

This month we are pleased to welcome Ms. Courtney France as our speaker. Courtney's presentation will cover aspects of the LEED program that every consulting engineer and mechanical contractor should know. She will be presenting an overview of the LEED Rating System process and keys to success for completing the LEED certification on your projects. The presentation will specifically highlight applications of ASHRAE within the LEED Rating System, as well as an inside peak into the upcoming LEED v2.2 revisions for ASHRAE standards. She will cover the items every consultant and engineer needs to know if they are going to be involved on a LEED project.

Ms. France is the LEED Coordination Services Team Leader for Architectural Energy Corporation (AEC), managing a team of five LEED Project Managers and Coordinators. AEC's LEED Team is currently working on more than forty LEED registered projects across the country. Ms. Courtney France, LEED, A.P. is a graduate from Purdue's Construction Engineering and Management program and worked with a large general contractor in Denver prior to joining AEC's sustainable design and construction services team.

Our meeting this month will be a joint meeting with SMACNA at their Training Center. The address is: 1515 W. 47<sup>th</sup> Avenue, Denver, CO 80211. The meeting will begin at 5:30 and will follow our traditional outline, with our speaker beginning at 7:00 pm.

Please RSVP to: Carla Pacheco, Fax: (303) 832-5116, E-mail: [smacnaco@rmi.net](mailto:smacnaco@rmi.net)



# ROCKY MOUNTAIN ROSTER



President .....John Stumpf.....john.stumpf@york.com

President Elect.....Kevin Parrot .....KevinP@trinity-mechanical.com

Vice President.....Brian Lynch .....brian.lynch@york.com

Secretary .....Scott Martin.....smartin@rmhgroup.com

Treasurer .....Jeremy Hollands .....jhollands@catorruma.com

Newsletter Editor .....Justin Dunkin .....justind@cfmcompany.com

Membership .....Larry Hodgins.....lhodgins@empiregas.com

Refrigeration .....Dave Rodenberg.....drodenberg@long.com

Historian.....Steve Maxson .....smaxson@sbengr.com

Technology Transfer .....Ken Urbanek.....kurbanek@mkkeng.com

Resource Promotions .....Kevin Parrot .....KevinP@trinity-mechanical.com

Web Master .....Kyle Manske .....kmanske@comfortsystemsusa.com

Education Chairman .....Kevin Ainsworth .....kainsworth@mcgrath-inc.com

Director .....Mark Jelinske .....mjelinske@catorruma.com

Director .....Kate Allen.....kate3222@msn.com Past

President.....Dave Rodenberg.....drodenberg@long.com





# PRESIDENT'S MESSAGE



Hello ASHRAE members,

Thanks to all the members that RSVP'd for last month's meeting at the Wynkoop. We had another great turnout and I appreciate everyone taking time out of his or her busy schedules to attend. I would like to say thank you to Dave Kahn for covering the ASHRAE 62.1-2004 standard. This combined with his knowledge of the International Building Code made for some interesting comparisons.

Our Oktoberfest at the Stone House in Lakewood was another great success. Not only did we raise money towards our ASHRAE Research fund we also had a great day to enjoy each other's company on a gorgeous fall afternoon. Once again I would like to say thanks to Kevin Ainsworth for putting this on.

The November meeting will be a joint meeting with SMACNA at their training facility along with our first student night of the year. Our Speaker will discuss "Today's LEED, Tomorrow's ASHRAE: An Engineers Guide". I think this is another great program where everyone will be able to learn something. This month make sure to RSVP with Carla Pacheco at the SMACNA's office at either Fax: (303) 832-5116 or E-mail: [smacnaco@rmi.net](mailto:smacnaco@rmi.net).

National is looking for the Rocky Mountain Chapter to participate in the SOLAR 2006 conference to be held next July in Denver. We are evaluating a couple of options. One is to have members of the Rocky Mountain Chapter submit abstracts for paper presentations by the December 5<sup>th</sup> deadline. If these are submitted with a notation that these are for the ASHRAE session we can sort them out later, if accepted. Another option is to organize an ASHRAE forum, which could be a panel discussion if we wished, or set of brief presentations, on the topic of ASHRAE experiences in the design, installation, and operation of renewable energy systems. For either approach it would be helpful to relate ASHRAE members' experience to the recently published ASHRAE Research Strategic Plan (see the web site), which identifies "Renewable Energy Applications for Buildings" with six subtopics listed. I would like all of you to think about these two options and let me know either at the meeting this month or via email if you were interested in being involved in this conference.

Thank you for supporting your Rocky Mountain ASHRAE Chapter and I look forward to seeing everyone next Wednesday at SMACNA's training facility located at 1515 W. 47<sup>th</sup> Avenue, Denver, CO 80211!

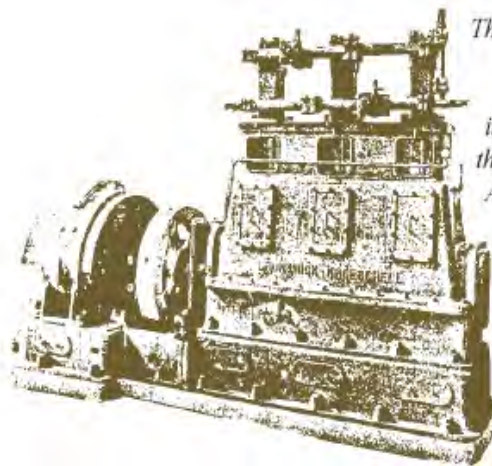
John D. Stumpf  
[john.stumpf@york.com](mailto:john.stumpf@york.com)  
President, Rocky Mountain Chapter ASHRAE





Carbon dioxide (CO<sub>2</sub>) was first proposed as a refrigerant for vapor-compression systems by Alexander Twining in 1850. The use of CO<sub>2</sub> cold storage saw widespread application on ships, replacing the compressed air machines commonly used. The application of carbon dioxide (CO<sub>2</sub>) refrigeration systems for comfort air cooling reached its highest point in the 1920s. In the early 1930s, new CO<sub>2</sub> refrigerating systems for air-cooling and cold storage applications practically disappeared. The Depression caused a significant reduction in the number of installations and the advent of R-12 for comfort-cooling systems replaced the use of CO<sub>2</sub> as the “safe” refrigerant. During this time, a number of established refrigeration companies manufacturing ammonia compressors also made a line of carbon dioxide compressors. This enabled them to participate in the growing market for comfort cooling.

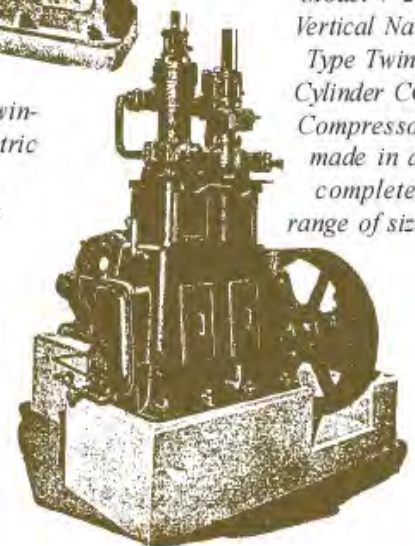
## The Rise and Fall of Carbon Dioxide Systems



*Three-Cylinder Vertical Marine Type CO<sub>2</sub> Compressor as installed on many of the most recently built American passenger vessels.*



*Model EC12 Twin-Cylinder Eccentric Drive CO<sub>2</sub> Compressor.*



*Model V-26 Vertical Navy Type Twin-Cylinder CO<sub>2</sub> Compressor, made in a complete range of sizes.*

Carrier CO<sub>2</sub> Compressors, 1933



## The Latest in Technical, Energy, and Government Activities

### Energy Policy Act of 2005 Making Impacts on Industry; New DOE Appliance Efficiency Standards Added to Federal Register

WASHINGTON, D.C. A final rule from the U.S Department of Energy (DOE) to codify 15 energy-efficiency standards for residential appliances and commercial equipment was published in the Federal Register on Oct. 18. These standards were established as part of the comprehensive energy bill signed by President George W. Bush on Aug. 8. The rule addresses specific devices for which the Energy Policy Act of 2005 requires certain standards. The devices covered include ceiling fans, unit heaters, dehumidifiers, commercial package air-conditioning and heating equipment, and commercial refrigerators and freezers.

For more information on these new efficiency standards visit the Department Of Energy website at [www.doe.gov](http://www.doe.gov).

### Interactive CD Provides Greater Access to ASHRAE Handbook

ATLANTA An enhanced CD-ROM provides greater access to the technical guidance in the ASHRAE Handbook. The ASHRAE *HandbookCD+* 2002-2005 is the Society's first four-volume HandbookCD with electronic enhancements. "The CD provides users with the most complete and useful HVAC&R reference available," Mark Owen, ASHRAE Handbook editor, said. "The CD+ contains all Handbook chapters with the latest updates in a searchable electronic format, featuring interactive and supplemental tools."

These tools include:

- Spreadsheets demonstrating the radiant time series (RTS) method of load calculation;
- Greatly expanded climatic design data tables from the 2005 Handbook, *Fundamentals*;
- NAIMA 3E Plus software for calculating insulation thickness;
- A desiccant wheel performance estimator;
- Video clips of kitchen hood airflows;
- Equipment animations;
- Interactive charts and spreadsheets;
- Supplemental examples and text;
- More links to organizations and data;
- Color graphics for improved understanding, surpassing the presentation possible in the black-and-white print volumes;
- Links to commercial resources that allow users to source products and services related to the topic of each chapter.

For more information on the ASHRAE Handbook CD-ROM and other great ASHRAE references check out the ASHRAE Bookstore Website at [www.ashrae.org](http://www.ashrae.org) and then click on the link to the Bookstore.







# ANNOUNCEMENTS



## ASHRAE/SMACNA COLORADO 2006 HVAC&R MECHANICAL EQUIPMENT & PRODUCT DIRECTORY

Available for purchase in mid January for \$45 a copy.

A complete list of available product lines and services makes this directory an invaluable resource! It includes current product and contact information for representatives, distributors, wholesalers, engineers, contractors and other related businesses within the HVAC&R industry.

Look for it at the monthly ASHRAE meeting or contact Ronnie Zimmerman, MKK Consulting Engineers at 303-796-6089 or [rzimmerman@mkkeng.com](mailto:rzimmerman@mkkeng.com).

---

## New Faces of Engineering

ASHRAE Members: Are you interested in promoting an outstanding young employee, your company and ASHRAE?

Then I encourage you to enter the *New Faces of Engineering*.

Part of National Engineers Week, Feb. 19-25, the New Faces program highlights the contributions of the industry's newest engineers. Each year, the program culminates with a full-page ad in *USA Today* of the top 16 New Faces. The ad features a photo of the selected young engineers, the name of the company for which they work and a brief description of their contributions.

Within ASHRAE, this same information is used to promote the Society's nominees in *ASHRAE Insights*, in the ASHRAE electronic newsletter, *E-Connections*, and on ASHRAE.org.

To make this program successful, ASHRAE needs the help of its members. We are seeking nominees. Nominees must be under the age of 30, hold an engineering degree, be employed as an engineer for between two and five years, have been involved in projects that significantly impact public welfare or further professional development and growth and be an ASHRAE member.

To nominate young engineers, submit the completed nomination form on ASHRAE.org at [www.ashrae.org/newfaces](http://www.ashrae.org/newfaces). We ask that you submit nominations to ASHRAE by **November 1, 2005**.

The *New Faces of Engineering* strives to promote the accomplishments of young engineers by highlighting their engineering contributions and the resulting impact on society. It is a recognition program, not a competition. Nominees should be able to tie at least one achievement to something the non-engineering community can appreciate.





# ANNOUNCEMENTS



## Advanced Facilities Engineering Conference and Technical Demonstrations

**Denver Merchandise Mart Expo Hall**

**58<sup>th</sup> Avenue & I-25**

**NOVEMBER 10-11**

**[www.afec.biz](http://www.afec.biz)**

Advance your skills and knowledge so you are better equipped to manage today's job demands! See exhibits, demonstrations, attend seminars, special events and special keynote by Clint Hurdle, Manager Colorado Rockies. If you are a **consulting engineer- chief engineer- plant engineer- energy engineer- security manager- facility engineer- building facility manager-safety engineer- environmental engineer- consultant- hospital engineer- maintenance director, or property manager**, then this conference is for you!





# EMPLOYMENT LISTINGS



Position(s): HVAC Project Engineer  
Company: The Ballard Group, Inc.  
Main Phone: 303 988 4514  
Fax: 303 988 4517  
Address: 2525 S. Wadsworth Blvd., Suite 200  
Lakewood, CO 80227

Contact: Steve Franz  
Contact Phone: 303 988 4514  
Contact Email: [sfranz@theballardgroup.com](mailto:sfranz@theballardgroup.com)

The ideal candidate will have a minimum of 4 years HVAC design experience and enjoys working on a wide variety of project types. The Ballard Group is an HVAC design firm with 20 employees. We have been in business since 1978 and work primarily on healthcare, education and fitness center projects.

---

Position: Preconstruction Engineer  
Company: U.S. Engineering Company  
Web Site: [www.usengineering.com](http://www.usengineering.com)  
Main Phone: 303-964-8060  
Fax: 303-964-8063  
Address: 729 S.E. 8<sup>th</sup> St.  
Loveland, CO 80537

Contact: Dennis Simonich  
Contact Phone: 303-964-8060  
Contact Email: [dsimonich@usengineering.com](mailto:dsimonich@usengineering.com)

## **Preconstruction Project Engineer**

U.S. Engineering Company is seeking to hire a preconstruction project engineer for a permanent position in the Colorado Region. U.S. Engineering Company is one of Colorado's leading mechanical contractors providing high quality piping, plumbing, and sheetmetal services. Degree in mechanical engineering or architectural engineering required. Entry level up to 2 years experience in mechanical consulting engineering preferred. Position includes but not limited to: Conceptual & schematic level systems design of plumbing, piping, & HVAC systems. Conceptual estimating and value engineering. Proposal preparation and presentation. Candidate must have good communication skills. Salary & benefits competitive. If interested, please contact Dennis Simonich 303-964-8060. U.S. Engineering Company is an equal opportunity employer. Visit our website at **[www.usengineering.com](http://www.usengineering.com)**







# EMPLOYMENT LISTINGS



Position(s): Sr. Electrical Engineer, PE registered in CO  
Company: Caveo Consulting Engineers  
Web Site:  
Main Phone: 720-200-5955  
Fax: 720-200-5530  
Address: 6143 S. Willow Drive, Ste. 405, Englewood, CO 80111

Contact: John Boetjer  
Contact Phone: 720-200-5955  
Contact Email: [jboetjer@caveoeng.com](mailto:jboetjer@caveoeng.com)

## **We have an IMMEDIATE need for a senior Electrical Engineer.**

**Caveo** is a growing mechanical/electrical consulting engineering firm dedicated to serving the Healthcare communities in Colorado and the Carolinas. Caveo specializes in the design of power, communication, lighting, fire alarm, low voltage, HVAC, plumbing, and fire protection systems for Healthcare facilities.

We work directly for building Owners or as a consultant to other design professionals for evaluating, planning and designing building and campus systems. We pride ourselves on developing long-term relationships with facility Owners and as their strategic partner strive to not only satisfy their technical and functional needs but also contribute to the client's overall business goals.

We specialize in renovation of existing facilities and also provide MEP design for new construction. Our office is equipped with the latest computer technology and design software to allow our design professionals to work efficiently.

The ideal candidate to join our team will:

- Have a Bachelor of Science Degree (minimum) in electrical engineering or architectural engineering with an emphasis in electrical systems design.
  - Be a licensed professional engineer in Colorado, or able to attain licensure.
  - Have at least 10 years electrical consulting engineering experience in the design of electrical systems for Healthcare and/or similar facilities.
  - Demonstrated success in project and client management.
  - Demonstrated success in project sales, a plus.
  - Possess good writing and communication skills. Microsoft Office proficiency required.

If you are self motivated, energetic and interested in an Opportunity for potential future ownership in a growing firm, dedicated exclusively to the Healthcare market, then we encourage you to contact us.





# EMPLOYMENT LISTINGS



Position(s): **Mechanical HVAC Engineer**

Company: CH2M HILL

Web Site: [www.ch2m.com](http://www.ch2m.com)

Main Phone: (303) 771-0952

Address: 9191 S. Jamaica St. Englewood, CO 80112

Contact: Tony Moell

Contact Phone: 530-229-3444

Contact Email: [tmoell@ch2m.com](mailto:tmoell@ch2m.com)

## More Info:

CH2M HILL is an employee-owned, multinational firm providing engineering, construction, operations, communications, security, environmental, and related services to public and private clients in numerous industries on six continents. CH2M HILL offers integrated services that help our clients take an infrastructure project from concept to reality. Our firm is structured to leverage our collective knowledge, allowing us to satisfy each client's unique needs and deliver results. We employ over 14,500 in 200 offices worldwide.

## Qualifications:

Successful candidate will assist senior engineer in design of HVAC and plumbing systems in the water/wastewater industry, military facilities, telecommunications, offices and laboratories. Candidate will be responsible to assist senior engineer in large projects and will complete design of smaller projects with limited supervision as lead engineer. Ideal candidate may eventually lead all HVAC design efforts in the Denver office.

BS Mechanical Engineering with minimum 3 to 5 years direct consulting engineering experience in the design, selection, and specifying of equipment for HVAC, plumbing and fire protection systems for large construction projects. AutoCAD or Microstation experience desired. Experience with Carrier or similar, building HVAC loads modeling. Working knowledge of Uniform and International Mechanical, Plumbing and Fire Codes. Construction experience and/or system startup a plus. Some experience with coordination with local building departments. Good communication skills to allow project coordination with team members assigned to several offices. Experience with coordinating electrical and control requirements with other discipline engineers. Ability to multitask and to work on fast paced design projects. Ability to pass EIT and PE within 3 years required. Position located in Englewood, CO and will be required to travel to other CH2M HILL offices for temporary assignment.

**Please Apply online at [www.ch2m.com](http://www.ch2m.com) Go to careers and apply to requisition 8605BR, or send your resume to [careers@ch2m.com](mailto:careers@ch2m.com) you must reference 8605BR for proper routing**





# EMPLOYMENT LISTINGS



Position(s): Project Engineer in Salt Lake City, Utah or San Francisco, California  
Company: Nexant, Inc.  
Web Site: [www.nexant.com](http://www.nexant.com)  
Main Phone: (415) 369-1000  
Fax: (415) 369-9700  
Address: 101 Second Street, 11<sup>th</sup> Floor  
San Francisco, CA 94105-3672

Contact: Jonathon Kiyoi  
Contact Phone: (415) 369-1000  
Contact Email: [jobs@nexant.com](mailto:jobs@nexant.com)

Nexant, Inc. has an immediate opening for two experienced Project Engineers; one in Salt Lake City, Utah and another in San Francisco, California. The successful candidates will be responsible for providing technical engineering support for Nexant's Energy Systems Management unit. Specific responsibilities will include: performing energy engineering services for utility and end-use clients, reviewing electric energy efficiency and recommissioning projects, conducting on-site field inspections, installing field monitoring equipment, conducting investment grade audits, and other related tasks.

**The ideal candidate will possess:**

- Bachelor or Master's degree in mechanical engineering
- Minimum of 5 years of related engineering experience
- Strong background in building systems engineering - particularly HVAC systems, including design, commissioning, and analysis experience
- Hands-on experience with mechanical, electrical and control systems
- Commercial building energy auditing experience
- Industrial process knowledge and experience is a plus
- EIT or FE certification, PE license is preferred
- Proficient DOE2 modeling capabilities also a plus
- Excellent analytical, written communication and interpersonal skills

Interested applicants should send a cover letter listing your preferred location (Salt Lake City or San Francisco), salary requirements, and resume to [jobs@nexant.com](mailto:jobs@nexant.com) with the subject "ESM Project Engineering Position."

Nexant, Inc. is a leading provider of experience-based management and technology consulting services and technology solutions to electric utilities, energy producers, petroleum and chemical companies and energy end-users in all sectors. We provide competitive salaries, a comprehensive benefits package, a 401k retirement plan, and three weeks paid vacation per year.

Nexant, Inc. ([www.nexant.com](http://www.nexant.com)) is an equal opportunity employer and encourages workforce diversity. We welcome applications from all qualified candidates.





# EMPLOYMENT LISTINGS



Position(s): District Sales Manager  
Company: Belimo Aircontrols USA  
Web Site: [www.belimo.com](http://www.belimo.com)  
Main Phone: 203-791-9915  
Fax: 203-749-3857  
Address: 43 Old Ridgebury Rd., Danbury, CT 06813

Contact: Luann Marra  
Contact Phone: 203-749-3327  
Contact Email: [luann.marra@us.belimo.com](mailto:luann.marra@us.belimo.com)

Belimo Aircontrols USA is the leading manufacturer of electronic damper actuators and control valves for HVAC applications.

We are looking for a District Sales Manager responsible for the successful sale of Belimo products within the geographic area assigned, (currently Colorado, Wyoming, Montana and New Mexico) based on qualitative and quantitative objectives in the Contracting Business Department. Candidates must have proven track record in a sales and marketing position, and 5 years activity in the HVAC industry. We offer a competitive salary and benefits package .

---

Position: **Mechanical Engineer, Mechanical Designer**  
Company: Cator, Ruma & Associates  
Web Site: [www.catorruma.com](http://www.catorruma.com)  
Main Phone: 303.462.8438  
Fax: 303.233.3701  
Address: 1550 Dover Street, Suite 2  
Denver, CO 80215

Contact: human resources  
Contact Phone: 303-974-1219  
Contact Email: [cra@catorruma.com](mailto:cra@catorruma.com)

Cator, Ruma & Associates is a mechanical and electrical consulting engineering firm that has enjoyed an excellent reputation for over 45 years. We are seeking a few experienced engineers/designers to join our team. Candidates should have a minimum of 5 years experience in commercial /institutional mechanical systems design. We can offer you an excellent salary, fully paid major medical, 401K, flex time and Friday afternoons off. Fax your resume, e-mail us, or visit our website at [www.catorruma.com](http://www.catorruma.com).





# EMPLOYMENT LISTINGS



Position(s): **Engineer and Sales Account Manager**

Company: Setpoint Systems Corp.

Fax: 303.733.2333

Address: 2680 S. Platte River Dr.  
Denver, CO 80223

Contact Email: [service@setpointsystems.com](mailto:service@setpointsystems.com)

## Engineers/HVAC/Fire Alarm

Setpoint Systems Corp., an award-winning, growing 22 year old system integration firm has immediate openings for Jr. and Sr. Engineers to design control systems for HVAC, Card Access, CCTV, and Fire Alarm. Position requires at least 3 years of experience and a good working knowledge of AutoCAD. Must have good organizational skills and be a self starter.

## Account Manager (Sales)

Seeking an individual and a leader with analytical, competitive, presentation and organizational skills. Position requires at least 3 years of experience in HVAC, Access, CCTV, & Fire Alarm. Must be a self starter.

## ASHRAE FUNNIES



**"I can offer you a great benefits package:  
liberal use of the company bike, paid nap time,  
free cootie insurance, and a pension at age 10."**





# MEMBERSHIP PROMOTION



Welcome to October's edition of "The Membership Promotion Page." As promised last month, I will discuss membership levels, transferring Student Members, and membership reinstatement.

## **1. Membership levels:** Grade name, description, annual cost, and publications benefits

**Life Member / Life Associate Member** Awarded to individuals who have thirty or more years in ASHRAE and must be at least 65 years of age. The appropriate grade is automatically established by Society with notification to the Chapters. (\$0 annually receives Journal, Insights Handbooks on request)

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**Member** Awarded to individuals who have twelve or more years of qualified industry-related experience. Credit for industry related experience can be earned from any combination of approved education, work experience and professional registration. (\$150 annually receives Journal, Insights and Handbook)

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**Affiliate Member** ASHRAE's newest grade is an introductory grade for applicants with a general interest in the Society's programs and services. Assignment to this grade is limited to those who are under 30 years of age who are first-time new members. (\$40 annually no Journal, Insights 20% off Handbook)

**Student Member** Must be studying or have an interest in an HVAC&R industry-related field. Eligible students must be participating in an approved course of study in a university, college, junior college, or technical institute. (\$16 annually receives Journal, Insights - \$49 each Handbook volume)

## **2. Student Transfer Program:** Lower cost for the first three years as an Associate Member to as you transition into your career.

First year after graduation: \$16.00

Second year after graduation: \$40.00

Third year after graduation: \$40.00

Please send an email to [students@ashrae.org](mailto:students@ashrae.org), and Society will work directly with you.

## **3. Reinstatement:** You may either reinstate your membership from your last grade held by completing and sending the Society membership form with a check / money order for \$150.00; or you may back pay all your missing years thus receiving "time credit" useful towards your Life Member / Life Associate Member and all back-editions of handbooks.

The back-pay option will require direct intervention from Society, and the back-editions of handbooks will be sent only upon your request.

Larry Hodgins, Membership Promotion Chair

c. 720.939.4094

e. [membership@rockymtnashrae.com](mailto:membership@rockymtnashrae.com) or [larry@acemechanical.com](mailto:larry@acemechanical.com)







NAME: \_\_\_\_\_  
 (LAST) (FIRST) (MI)

STATUS: RENEWAL\_\_\_\_ NEW MEMBER\_\_\_\_ ADDRESS CHANGE\_\_\_\_

PLEASE CIRCLE PREFERRED MAILING ADDRESS:

HOME ADDRESS & PHONE

BUSINESS NAME, ADDRESS & PHONE

\_\_\_\_\_  
 \_\_\_\_\_

\_\_\_\_\_  
 \_\_\_\_\_

p: \_\_\_\_\_

p: \_\_\_\_\_

Preferred email address: \_\_\_\_\_

Society Membership No.: \_\_\_\_\_

Name Tag (\$10.00) PAID? Y N

Name to appear on name tag as: \_\_\_\_\_

I WOULD LIKE TO BE CONTACTED ABOUT SERVING ON ONE OF THE FOLLOWING COMMITTEES OR FUNCTIONS (PLEASE CIRCLE).

- A. NEWSLETTER
- B. MEMBERSHIP
- C. MEETING ATTENDANCE
- D. EDUCATION
- E. GOLF
- F. CHAPTER HISTORIAN
- G. TECHNICAL SEMINARS

- H. RESEARCH FUND PROMOTIONS
- I. MONTHLY MEETING PROGRAMS
- J. PUBLICITY
- K. SPOUSE'S NIGHT / SOCIAL COMMITTEE
- L. COLORADO ENGINEERING COUNCIL
- M. GENERAL (COMMITTEE HELP)
- N. ENERGY COMMITTEE

PLEASE MAIL THIS INVOICE AND YOUR CHECK FOR \$35.00 + \$10.00 (PAYABLE TO ROCKY MOUNTAIN CHAPTER ASHRAE) TO THE ADDRESS BELOW. SOCIETY WILL INVOICE YOU FOR BOTH SOCIETY AND LOCAL DUES EVERY YEAR FOLLOWING THIS FIRST YEAR:

Larry Hodgins, 13271 Holly St #F, Thornton CO 80241

membership@rockymtnashrae.org





## FIRST CLASS

Chapter may not act for Society. Expressions,  
opinions, and comments within this newsletter should  
not be taken as those of the Chapter or Society.

Rocky Mountain Chapter of ASHRAE  
c/o Justin Dunkin  
CFM Company  
1495 S. Platte River Dr.  
Denver, CO 80223  
303-607-4444



## ACTIVITIES CALENDAR



For membership info or change of address contact: Larry Hodgins • Empire Gas • [lhodgins@empiregas.com](mailto:lhodgins@empiregas.com)

November 2, 2005

### **Student Night & Joint Meeting with SMACNA**

Topic: LEED For contractors and Consulting Engineers

December 7, 2005

### **Refrigeration Night**

Topic: Ammonia Refrigeration

January 4, 2006

### **Past President's Night**

Topic: If I knew then, what I know Now

February 1, 2006

### **Spouse / Significant Other Night**

Tentative Topic: Comedy Show

March 1, 2006

TBD

April 5, 2006

TBD

May 3, 2006

TBD

Visit the new Rocky Mountain ASHRAE website:

[www.rockymtnashrae.com](http://www.rockymtnashrae.com)



NEWSLETTER OF THE ROCKY MOUNTAIN CHAPTER  
AMERICAN SOCIETY OF HEATING, REFRIGERATING, AND AIR-CONDITIONING ENGINEERS, INC.

Volume 47, Number 3

DECEMBER 2005

Editor: Justin Dunkin

Visit the new Rocky Mountain ASHRAE website:  
[www.rockymtnashrae.com](http://www.rockymtnashrae.com)

**Date:** December 7, 2005

**Cost:** Rocky Mtn Chapter Members-\$25\*

\*With Reservations Made Before Monday Noon

**Tour:** Coors Golden Distribution Center  
(See Map)

Guests, Non-members or Without Reservation - \$30

**Dinner:** Table Mesa Inn

Students - \$20

**Location:** 1310 Washington Ave  
Golden, CO

**RSVP:** Jeremy Hollands

**E-mail:** JDH@catorruma.com

**Time:** 4:00 Tour  
5:30 Social Hour  
6:30 Dinner  
7:00 Program Begins

Meeting will **NOT** be held at the Wynkoop.



## DECEMBER PROGRAM



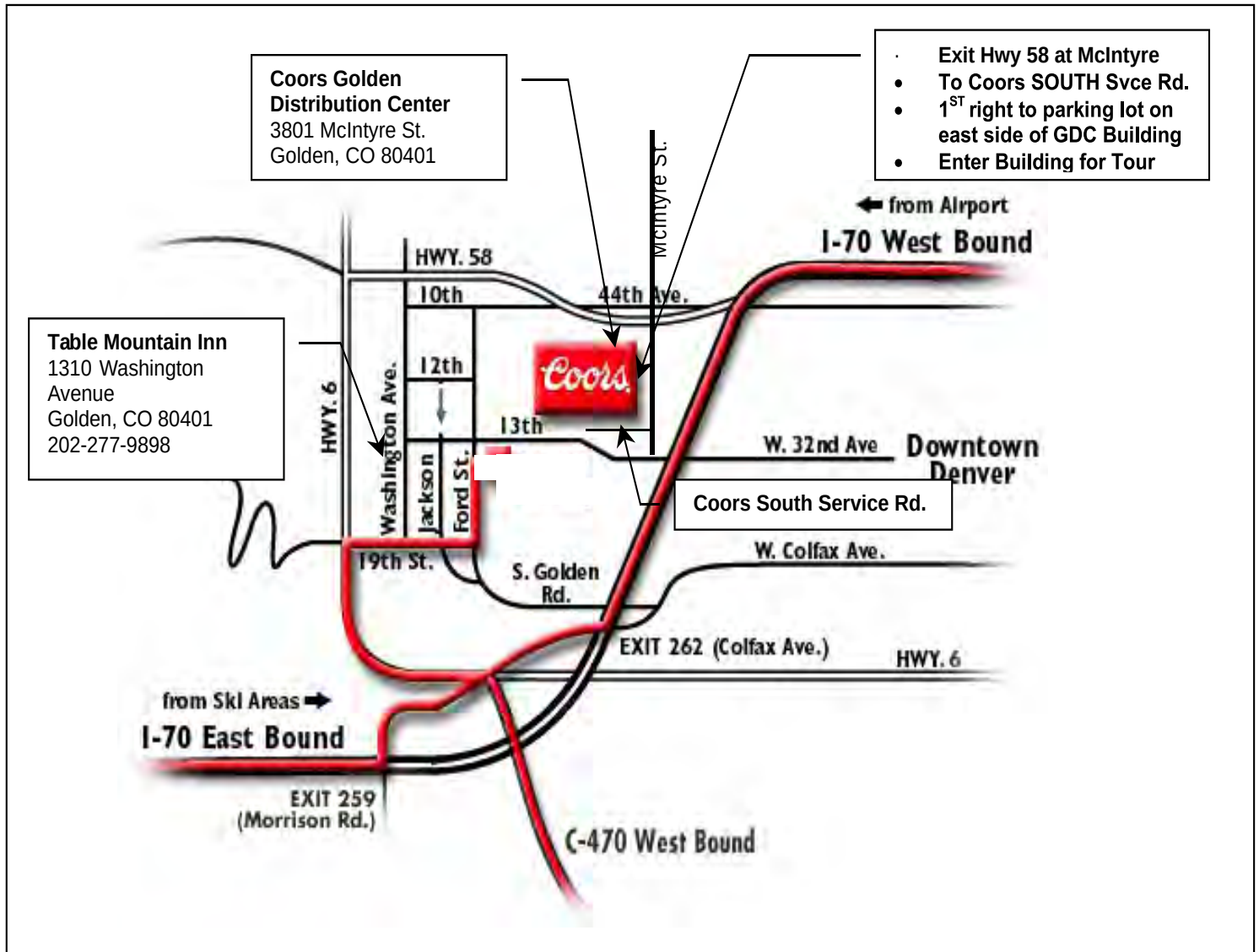
### Refrigeration: Weighing Ammonia vs. R-22 A Lifecycle Approach

This month we are pleased to welcome Mr. Ed Trotter as our refrigeration systems speaker. Ed will cover the design and operation of the recently completed Coors Golden Distribution Center. How to weigh competing priorities such as upfront cost, energy consumption, maintenance costs, safety, refrigerant type and maintainability will be discussed. The design of the 268,000 square foot, 34 F refrigerated facility included an analysis of 6 different types of refrigeration systems prior to the ultimate selection of ammonia recirculation. Mike Fognani with Coors will briefly cover the innovative features of the building design. Mark Dawson, Vice-President with Rocky Mountain Mechanical Systems will present an overview of the issues related to maintaining an ammonia refrigeration system.

Mr. Trotter is the lead mechanical engineer for the Coors-Jacobs Alliance with Jacobs Engineering Group in Golden, CO. He manages a group of twelve engineers and designers that handle the packaging, brewing, grain handling, refrigeration, HVAC and utility system design for the Coors Brewing Company. Ed has 13 years of engineering and construction industry experience and has worked for consulting firms, food processors, Coors Brewing Company, and an overseas development agency.

Our meeting, this month, will be start with a tour of the Coors Golden Distribution Center (see map for where to meet). The tour is planned to start at 4:00 pm and end at 5:30 pm. Tours will be led by Ed Trotter, Mike Fognani, Skip Willenbrock, and Bruce Byrd. We will proceed from the Distribution center to the Table Mesa Inn (1310 Washington Ave in Golden, CO.) The meeting will begin at 5:30 as normal, and will follow our traditional outline, with our speaker beginning at 7:00 pm.

# DECEMBER MEETING DIRECTIONS





# ROCKY MOUNTAIN ROSTER



President .....John Stumpf.....john.stumpf@york.com

President Elect.....Kevin Parrot .....KevinP@trinity-mechanical.com

Vice President.....Brian Lynch .....brian.lynch@york.com

Secretary .....Scott Martin.....smartin@rmhgroup.com

Treasurer .....Jeremy Hollands .....jhollands@catorruma.com

Newsletter Editor .....Justin Dunkin .....justind@cfmcompany.com

Membership .....Larry Hodgins.....lhodgins@empiregas.com

Refrigeration .....Dave Rodenberg.....drodenberg@long.com

Historian.....Steve Maxson .....smaxson@sbengr.com

Technology Transfer .....Ken Urbanek.....kurbanek@mkkeng.com

Resource Promotions .....Kevin Parrot .....KevinP@trinity-mechanical.com

Web Master .....Kyle Manske .....kmanske@comfortsystemsusa.com

Education Chairman .....Kevin Ainsworth .....kainsworth@mcgrath-inc.com

Director .....Mark Jelinske .....mjelinske@catorruma.com

Director .....Kate Allen.....kate3222@msn.com

Past President .....Dave Rodenberg.....drodenberg@long.com





# PRESIDENT'S MESSAGE



Happy Holidays ASHRAE members,

First I want to ensure that everyone knows that we will not be meeting at the Wynkoop this month and Past Presidents Night will be moved to January this year so for all those Past Presidents that show up in December make sure to bring your wallets.

Last month's meeting was another success. Our Speaker Ms. France was energetic and engaging about the LEED programs available. Her presentation managed to keep our students poised on the edge of there seats.

Our first student night of the year was a huge success for the University of Wyoming. They ran the table taking four out of the four \$1000.00 scholarships we awarded this year. Thanks to all the student sponsors and we look forward to April for our next student event.

This month's tour will be held at the Coors Golden Distribution facility where we will hear about the selection process of why they choose Ammonia over other refrigerants available for there refrigeration system. See the program announcement for details.

National is still looking for the Rocky Mountain Chapter members to participate in the SOLAR 2006 conference to be held next July in Denver. They are evaluating a couple of options. One is to have members of the Rocky Mountain Chapter submit abstracts for paper presentations by the December 5 deadline (flexible). If these are submitted with a notation that these are for the ASHRAE session they can sort them out later if accepted. Another option is to organize an ASHRAE forum which could be a panel discussion if we wished, or set of brief presentations, on the topic of ASHRAE experiences in the design, installation, and operation of renewable energy systems. For either approach it would be helpful to relate ASHRAE members' experience to the recently published ASHRAE Research Strategic Plan (see the web site), which identifies "Renewable Energy Applications for Buildings" with six subtopics listed. I would like all of you to think about these two options and let me know either at the meeting this month or via email if you were interested in being involved in this conference. Please contact: Bruce Hunn at [bhunn@ashrae.org] for further details.

Thank you for supporting your Rocky Mountain ASHRAE Chapter and I look forward to seeing everyone next Wednesday at the Coors distribution facility in Golden.

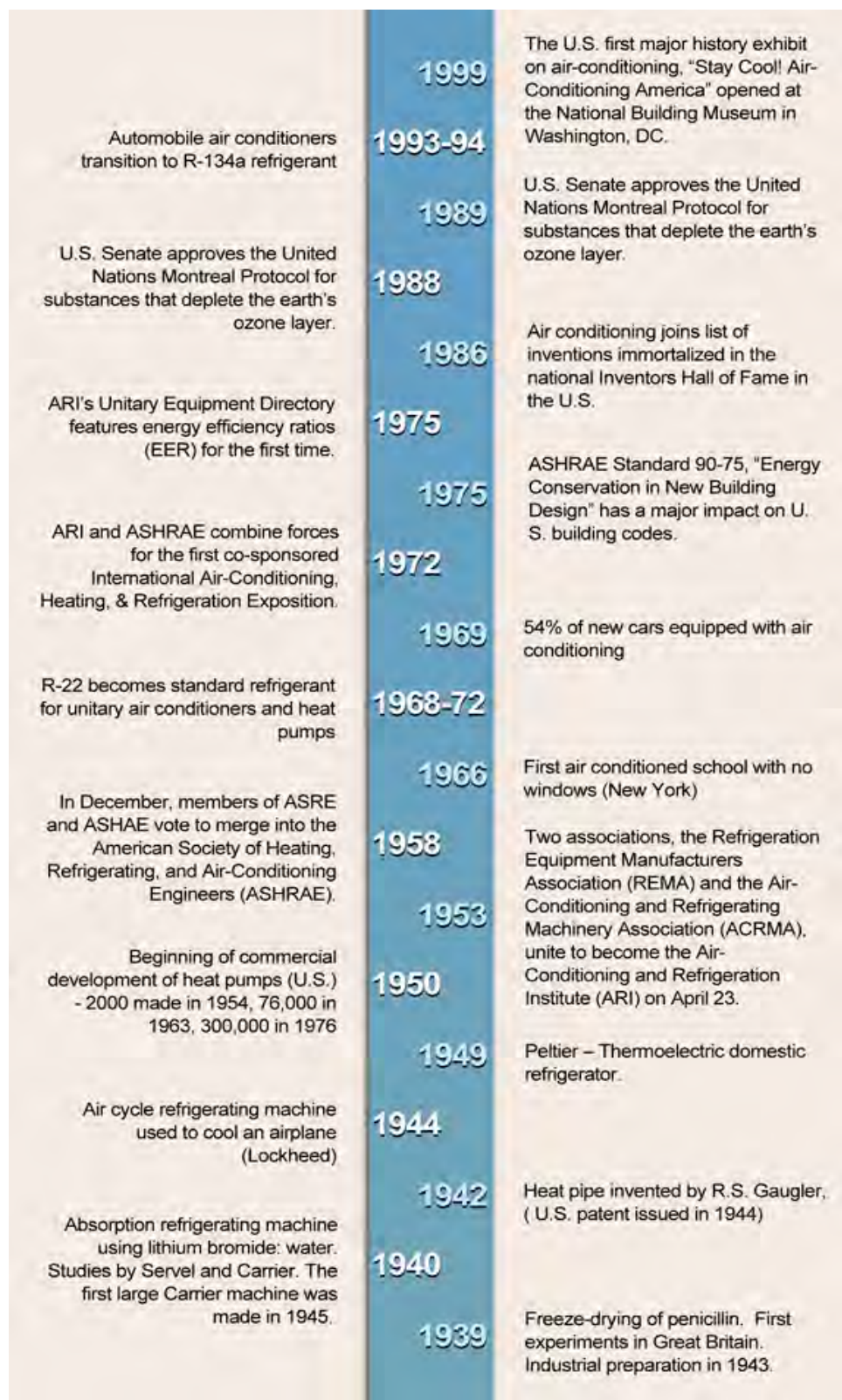
John D. Stumpf  
john.stumpf@york.com  
President, Rocky Mountain Chapter ASHRAE







## History of Refrigeration Timeline (1939-1999)





## The Latest in Technical, Energy, and Government Activities

### ASHRAE Launches Engineering for Sustainability Effort

ATLANTA The American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) has launched a new campaign emphasizing its role as “the engineering engine that drives sustainability.”



As part of ASHRAE's stronger focus on its involvement in green buildings, the Society has introduced a new logo, theme, Engineering for Sustainability, and Website, [www.engineeringforsustainability.org](http://www.engineeringforsustainability.org). These will be used to identify ASHRAE products and services related to sustainability.

“ASHRAE has long provided 'engineering for sustainability' by applying its diverse technology assets to the sustainability movement in energy efficiency, indoor environment and industrial processes,” Ron Jarnagin, chair of a committee developing a roadmap for sustainability for the Society, said. “With growing focus in the industry on the green movement, we need to emphasize that ASHRAE is the engineering engine that drives sustainability.”

Jarnagin noted that the Society's recent efforts include publishing and working on the Advanced Energy Design Guide series, Standard 90.1, which contains a section guiding designers on how to meet requirements for building rating programs, and the ASHRAE GreenGuide, all part of an ASHRAE green “toolkit.”

For more information please refer to the ASHRAE website at [www.ashrae.org](http://www.ashrae.org).

### User's Manual Provides Better Understanding of ASHRAE 62.1

ATLANTA A new user's manual provides users with a better understanding of the design, installation and operation requirements in ASHRAE's ventilation standard. The Standard 62.1 User's Manual explains the requirements of ANSI/ASHRAE Standard 62.1-2004, Ventilation for Acceptable Indoor Air Quality, and contains numerous examples of their application in an easy-to-follow question and answer format.

“Because the standard is written in code-intended language, such material could not be included in the standard itself, so the manual helps users better understand the intent and apply it to their work,” Dennis Stanke, chair of the Standard 62.1 committee, said. “It helps users understand what Standard 62.1 requires and how those requirements can be met. It's a document that designers have needed for many years and will find useful for many years to come.”

The manual includes a CD containing a spreadsheet to assist in the standard's new ventilation rate procedure calculations. The manual was developed through ASHRAE research and partially funded by the National Institute of Standards and Technology, the Air-Conditioning and Refrigeration Institute and the U.S. Green Building Council.

For more information on the ASHRAE 62.1 User's Manual and other great ASHRAE references check out the ASHRAE Bookstore Website at [www.ashrae.org](http://www.ashrae.org) and then click on the link to the Bookstore.





## EDUCATION



Congratulations to the four Rocky Mountain Chapter of ASHRAE Scholarship Recipients. All four were from the University of Wyoming this year, Julie Anderson, Diana Coronado, Jessica Jones and Kari Hallingbye. Thank you to Craig Watts, Ronnie Zimmerman and Dan Strait for helping with the evaluations of the nine applications and a thank you to our Student Night Sponsors.



## ANNOUNCEMENTS



### **ASHRAE/SMACNA COLORADO 2006 HVAC&R MECHANICAL EQUIPMENT & PRODUCT DIRECTORY**

Available for purchase in mid January for \$45 a copy.

A complete list of available product lines and services makes this directory an invaluable resource! It includes current product and contact information for representatives, distributors, wholesalers, engineers, contractors and other related businesses within the HVAC&R industry.

Look for it at the monthly ASHRAE meeting or contact Ronnie Zimmerman, MKK Consulting Engineers at 303-796-6089 or [rzimmerman@mkkeng.com](mailto:rzimmerman@mkkeng.com).





# EMPLOYMENT LISTINGS



Position(s): Mechanical Engineer/Designer  
Company: Cator, Ruma & Associates  
Web Site: cra@catorruma.com  
Main Phone: 303-232-6200  
Fax: 303-233-3701  
Address: 1550 Dover St., Suite 2, Lakewood, CO 80215  
Contact: Bruce Appel  
Contact Phone: 303-232-6200  
Contact Email: cra@catorruma.com

Cator, Ruma & Associates is a mechanical and electrical consulting engineering firm that has enjoyed an excellent reputation for over 45 years. We are seeking a few experienced engineers/designers to join our team. Candidates should have a minimum of 5 years experience in commercial/institutional mechanical systems design. We can offer you an excellent salary, fully paid major medical, 401K, flex time and Friday afternoons off. Fax your resume, e-mail us, or visit our website at [www.catorruma.com](http://www.catorruma.com).

---

Position(s): Mechanical Engineer, Electrical Engineer  
Company: Shaffer Baucom Engineering and Consulting  
Web Site: [www.sbengr.com](http://www.sbengr.com)  
Main Phone: 303-986-8200  
Fax: 303-986-8222  
Address: 7333 W. Jefferson Avenue  
Contact: Ellie Dugle  
Contact Phone: 303-986-8200  
Contact Email: [edugle@sbengr.com](mailto:edugle@sbengr.com)

**Mechanical Engineer:** Shaffer Baucom Engineering and Consulting is seeking a Mechanical Engineer to join our team. Successful candidate will have 5+ years experience, preferably in a consulting engineering environment and be experienced in the design of HVAC and plumbing systems. Healthcare, Educational and Laboratory experience a plus. Bachelors Degree and PE required. Excellent compensation package. Please submit resume and salary history to [edugle@sbengr.com](mailto:edugle@sbengr.com).

**Electrical Engineer:** Shaffer Baucom Engineering and Consulting is seeking an Electrical Engineer to join our team. Successful candidate will have a minimum of 5+ years experience, preferably in a consulting engineering environment and be experienced in the design of building power, lighting and fire alarm systems. Healthcare, Educational and Laboratory experience a plus. Bachelors Degree and PE required. Excellent compensation package. Please submit resume and salary history to [edugle@sbengr.com](mailto:edugle@sbengr.com).





# EMPLOYMENT LISTINGS

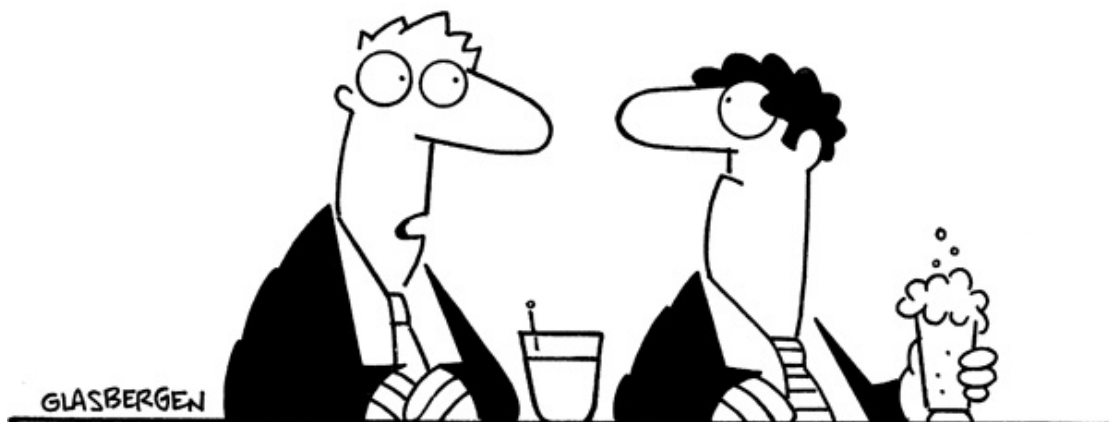


Position(s): HVAC Project Engineer  
Company: The Ballard Group, Inc.  
Main Phone: 303 988 4514  
Fax: 303 988 4517  
Address: 2525 S. Wadsworth Blvd.  
Suite 200  
Lakewood, CO 80227  
Contact: Steve Franz  
Contact Phone: 303 988 4514  
Contact Email: [sfranz@theballardgroup.com](mailto:sfranz@theballardgroup.com)

The ideal candidate will have a minimum of 4 years HVAC design experience and enjoys working on a wide variety of project types. The Ballard Group is an HVAC design firm with 20 employees. We have been in business since 1978 and work primarily on healthcare, education and fitness center projects.

## ASHRAE FUNNIES

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[www.glasbergen.com](http://www.glasbergen.com)



**“While I was thinking outside of the box, someone changed the password and now I can’t get back in!”**





# MEMBERSHIP PROMOTION



Welcome to December's edition of "The Membership Promotion Page."  
Please take a close look at the chapter's roster located at  
[www.rockymtnashrae.com](http://www.rockymtnashrae.com) for the following:

1. If you are a member of ASHRAE (student, associate, member, etc.) your name should be included within the roster.
2. If you have requested that your contact address be your residential address, I have only included your name and the city and state of your residence.
3. If you have requested that your contact address be your business address, I have included your name, the business name and mailing address, and your email address.
4. If a "0" appears where your email address should be, ASHRAE does not have an email address for you assuming your contact address is your business address.
5. Your name appears in the same format ASHRAE has it recorded. I have not attempted to add "Dr", "PE", "PhD" or other pertinent information that ASHRAE does not have.
6. If any of your information is incorrect, or if you want changes made to your information, please send an email to [larry@acemechanical.com](mailto:larry@acemechanical.com) and I will make the requested changes.
7. If you have been omitted from this list and want to know why, please send an email to [larry@acemechanical.com](mailto:larry@acemechanical.com) and I will research why ASHRAE is not including you. Common reasons for omission include human error and unpaid ASHRAE membership dues.

I hope everyone spends the holiday season surrounded by your closest friends and family.





NAME: \_\_\_\_\_  
 (LAST) (FIRST) (MI)

STATUS: RENEWAL\_\_\_\_ NEW MEMBER\_\_\_\_ ADDRESS CHANGE\_\_\_\_

PLEASE CIRCLE PREFERRED MAILING ADDRESS:

HOME ADDRESS & PHONE

BUSINESS NAME, ADDRESS & PHONE

\_\_\_\_\_  
 \_\_\_\_\_

\_\_\_\_\_  
 \_\_\_\_\_

p: \_\_\_\_\_

p: \_\_\_\_\_

Preferred email address: \_\_\_\_\_

Society Membership No.: \_\_\_\_\_

Name Tag (\$10.00) PAID? Y N

Name to appear on name tag as: \_\_\_\_\_

I WOULD LIKE TO BE CONTACTED ABOUT SERVING ON ONE OF THE FOLLOWING COMMITTEES OR FUNCTIONS  
 (PLEASE CIRCLE).

- A. NEWSLETTER
- B. MEMBERSHIP
- C. MEETING ATTENDANCE
- D. EDUCATION
- E. GOLF
- F. CHAPTER HISTORIAN
- G. TECHNICAL SEMINARS

- H. RESEARCH FUND PROMOTIONS
- I. MONTHLY MEETING PROGRAMS
- J. PUBLICITY
- K. SPOUSE'S NIGHT / SOCIAL COMMITTEE
- L. COLORADO ENGINEERING COUNCIL
- M. GENERAL (COMMITTEE HELP)
- N. ENERGY COMMITTEE

PLEASE MAIL THIS INVOICE AND YOUR CHECK FOR \$35.00 + \$10.00 (PAYABLE TO ROCKY MOUNTAIN CHAPTER ASHRAE) TO THE ADDRESS BELOW. SOCIETY WILL INVOICE YOU FOR BOTH SOCIETY AND LOCAL DUES EVERY YEAR FOLLOWING THIS FIRST YEAR:

Larry Hodgins, 13271 Holly St #F, Thornton CO 80241

membership@rockymtnashrae.org



## FIRST CLASS

Chapter may not act for Society. Expressions,  
opinions, and comments within this newsletter should  
not be taken as those of the Chapter or Society.

Rocky Mountain Chapter of ASHRAE  
c/o Justin Dunkin  
CFM Company  
1495 S. Platte River Dr.  
Denver, CO 80223  
303-607-4444



## ACTIVITIES CALENDAR



For membership info or change of address contact: Larry Hodgins • Empire Gas • [lhodgins@empiregas.com](mailto:lhodgins@empiregas.com)

December 7, 2005

### **Refrigeration Night**

Topic: Ammonia Refrigeration

January 4, 2006

### **Past President's Night**

Topic: If I knew then, what I know Now

February 1, 2006

### **Spouse / Significant Other Night**

Tentative Topic: Comedy Show

March 1, 2006

TBD

April 5, 2006

TBD

May 3, 2006

TBD

Visit the new Rocky Mountain ASHRAE website:

[www.rockymtnashrae.com](http://www.rockymtnashrae.com)





Volume 47, Number 5

**JANUARY 2006**

Editor: Justin Dunkin

Visit the new Rocky Mountain ASHRAE website:  
[www.rockymtnashrae.com](http://www.rockymtnashrae.com)

**Date:** January 4, 2006

**Cost:** Rocky Mtn Chapter Members-\$25\*  
\*With Reservations Made Before Tuesday Noon

**Dinner Location:** Wynkoop Brewing Company  
1634 18th St.  
Denver, CO 80202  
(Downtown, Corner of 18<sup>th</sup> & Wynkoop)

Guests, Non-members or Without Reservation - \$30  
Students - \$20

**RSVP: Jeremy Hollands**  
E-mail: [JDH@catorruma.com](mailto:JDH@catorruma.com)

**Time:** 5:30 Social Hour (Wynkoop)  
6:30 Dinner (Wynkoop)  
7:00 Program Begins (Wynkoop)



## JANUARY PROGRAM



### PAST PRESIDENTS NIGHT

*January 4, 2006*

This month we are pleased to welcome our chapter's past presidents as we honor them for the service they have given to our chapter and to ASHRAE as a whole. Please join us as we thank these individuals for their time and commitment to our industry.

Our presentation this month will be given by a few of these past presidents, industry leaders who will share their experiences, lessons learned, and insight. This hour will promise to be as valuable as any "technical" presentation.

Our meeting, this month, will be at the Wynkoop Brewery in downtown Denver. The meeting will begin at 5:30 with a Social Hour, dinner at 6:30, and with our speakers beginning at 7:00 pm.

See you next year!

---

Brian Lynch  
VP, Programs  
Rocky Mountain Chapter ASHRAE  
[brian.lynch@york.com](mailto:brian.lynch@york.com)





# ROCKY MOUNTAIN ROSTER



President .....John Stumpf.....john.stumpf@york.com

President Elect.....Kevin Parrot .....KevinP@trinity-mechanical.com

Vice President.....Brian Lynch .....brian.lynch@york.com

Secretary .....Scott Martin.....smartin@rmhgroup.com

Treasurer .....Jeremy Hollands .....jhollands@catorruma.com

Newsletter Editor .....Justin Dunkin .....justind@cfmcompany.com

Membership .....Larry Hodgins.....lhodgins@empiregas.com

Refrigeration .....Dave Rodenberg.....drodenberg@long.com

Historian.....Steve Maxson .....smaxson@sbengr.com

Technology Transfer .....Ken Urbanek.....kurbanek@mkkeng.com

Resource Promotions .....Kevin Parrot .....KevinP@trinity-mechanical.com

Web Master .....Kyle Manske .....kmanske@comfortsystemsusa.com

Education Chairman .....Kevin Ainsworth .....kainsworth@mcgrath-inc.com

Director .....Mark Jelinske .....mjelinske@catorruma.com

Director .....Kate Allen.....kate3222@msn.com

Past President .....Dave Rodenberg.....drodenberg@long.com





# PRESIDENT'S MESSAGE



## Happy New Year ASHRAE Members,

I hope everyone realized his or her goals and aspirations for 2005, and as 2006 is starting, all of us at ASHRAE would like to wish everyone a safe, prosperous, and healthy New Year.

I would like to welcome all of our past ASHRAE Presidents and let you know that without your guidance and wisdom our local chapter would not be as successful as it is at this time. Our newest inductee into this fraternity is David Rodenberg. David with all of his enthusiasm made last years meetings entertaining as well as educational.

Last month's tour took place at the Coors Golden Distribution Center in Golden. Although, it was only 38 degrees on the tour it seemed balmy compared to the outside temperature. Following the tour we adjourned to "The Table Mesa Inn" to discuss the design criteria, installation, and operational considerations concerning this project. Thank you Ed Trotter and Skip Willenbrock from Jacobs Engineering, Mark Dawson from Rocky Mountain Mechanical, and Mike Fognani with Coors for providing an informative discussion about this facility.

This month's meeting will highlight several past presidents to discuss "If I only knew then what I know now!" This discussion will take place at the Wynkoop Brewery and give us an opportunity to thank those that served as an ASHRAE President before us. We all look forward to seeing everyone and again we hope you all had a Happy Holiday season.

Thank you for supporting your Rocky Mountain ASHRAE Chapter and I look forward to seeing everyone next Wednesday at the Wynkoop Brewery in Downtown Denver.

John D. Stumpf

[john.stumpf@york.com](mailto:john.stumpf@york.com)

President, Rocky Mountain Chapter ASHRAE





## Resource Promotions

I am happy to report that your Rocky Mountain ASHARE Board of Governors achieved Full Circle status indicating that all of the voting members of the board personally donated at least \$100 to ASHRAE Research this year. The BOG has met this goal regularly and it is a further demonstration of the Boards willingness to give both time and money to a great cause. If you are looking for a place to make that end of year donation please think of all of the great things ASHRAE has done you and your occupation.

Additionally, the dinner meeting raffle has raised over \$335 dollars to date and no one has won the pot of the same amount. I would love to see that donation reach the \$1,000 mark and I think it is entirely possible. Remember you can't win if you don't play. Thanks again to ACE Mechanical for their support of the raffle in November and December. If you are interested in donating for the diner meeting raffle please contact me at [kevinp@trinity-mechanical.com](mailto:kevinp@trinity-mechanical.com).





## History of Refrigeration Timeline (1906-1939)

|                                                                                                                                                                                             |      |                                                                                                                                                   |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|---------------------------------------------------------------------------------------------------------------------------------------------------|
| Packard markets first successful year-round auto air conditioning system                                                                                                                    | 1939 |                                                                                                                                                   |
| Albert Henne, co-inventor of the Chlorofluorocarbon Refrigerants, synthesizes refrigerant R-134a. In 1980 it was hailed as the best non-ozone depleting replacement for Chlorofluorocarbon. | 1938 | Window air conditioner marketed by Philco-York.                                                                                                   |
| Chesapeake & Ohio Railroad begins running first overnight train with air conditioning, the "George Washington," between New York and Washington                                             | 1936 |                                                                                                                                                   |
|                                                                                                                                                                                             | 1936 | United Air Lines uses air conditioning in its "three mile a minute" passenger planes.                                                             |
|                                                                                                                                                                                             | 1932 |                                                                                                                                                   |
|                                                                                                                                                                                             | 1931 | Frigidaire markets "Hot-Kold" year-round central system air-conditioning system for homes.                                                        |
| Home in Tucson, AZ installed a heat pump air conditioner                                                                                                                                    | 1930 |                                                                                                                                                   |
|                                                                                                                                                                                             | 1928 | Chlorofluorocarbon refrigerants synthesized by General Motors Research Lab team of Thomas Midgley, Albert Henne and Robert McNary for Frigidaire. |
| Capillary tube refrigerant control invented by Thomas Carpenter                                                                                                                             | 1926 |                                                                                                                                                   |
|                                                                                                                                                                                             | 1925 | <i>The Aerologist</i> , the first air conditioning trade journal, published by E. Vernon Hill.                                                    |
| Gas fired absorption household refrigerator marketed by A.B. Elektrolux in Sweden.                                                                                                          | 1925 |                                                                                                                                                   |
|                                                                                                                                                                                             | 1916 | Clarence Birdseye began experiments in quick-freezing                                                                                             |
| Air cooled electric self-contained household refrigerating unit, the DOMELRE, marketed by Fred Wolf Jr.                                                                                     | 1914 |                                                                                                                                                   |
|                                                                                                                                                                                             | 1913 | M. T. Zarotschenzeff began experiments in quick freezing                                                                                          |
| First International Refrigeration Exposition held in Chicago                                                                                                                                | 1913 |                                                                                                                                                   |
|                                                                                                                                                                                             | 1911 | Constant superheat (thermostatic) expansion incorporated in a multiple evaporator refrigeration system patented by Albert Marshall                |
| First International Congress of Refrigeration. Paris                                                                                                                                        | 1908 |                                                                                                                                                   |
|                                                                                                                                                                                             | 1906 | Willis Carrier patents "dew point control" system for precisely controlling humidity in a room.                                                   |
| First hospital to be air conditioned: Boston Floating Hospital                                                                                                                              | 1906 |                                                                                                                                                   |
|                                                                                                                                                                                             | 1906 | The term "air conditioning" coined by Stuart Cramer                                                                                               |

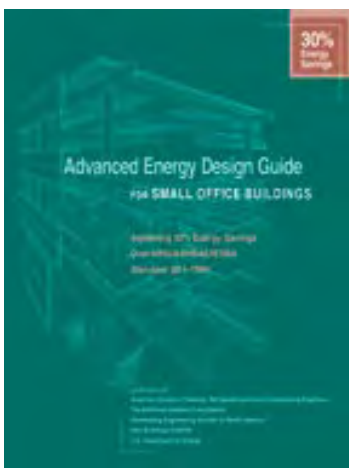


## The Latest in Technical, Energy, and Government Activities

### LEED Credits Now Available for Energy Design Guide Use

ATLANTA Designers can now earn credit under Leadership in Energy and Environmental Design (LEED) certification for use of the *Advanced Energy Design Guide for Small Office Buildings*.

The inclusion of the design guide will help designers achieve LEED certification, offered by the U.S. Green Building Council.



The small office design guide clearly meets the overall goal of LEED in that it accelerates the development and implementation of green building practices,” Lee Burgett, P.E., ASHRAE president, said. “The design guide series is intended to provide prescriptive guidance to bring us 30 percent closer to a net zero-energy building, meaning those that use equal or less energy than they produce on an annual basis. Our goal is to provide the technical resources needed to assist the HVAC&R industry in creating the most sustainable buildings possible.”

Specifically, the design guide has been added in LEED-NC 2.1 and the upcoming LEED-NC 2.2 as a prescriptive compliance path to achieve LEED-NC Energy and Atmosphere Credit 1, Optimize Energy Performance (EAc1), credit.

LEED-NC EAc1 is intended to reduce environmental impacts associated with excessive energy use by awarding LEED credit to buildings that achieve increasing levels of energy performance above ANSI/ASHRAE/IESNA Standard 90.1-1999.

The guide establishes a previously unavailable prescriptive compliance path and enables small office design teams to earn LEED-NC EAc1 points without incurring the costs associated with whole building energy simulation. Small office buildings that successfully demonstrate compliance with the guide will be awarded 4 LEED EAc1 points.

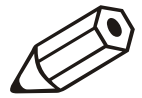
The guide was developed by a committee representing a diverse group of energy professionals drawn from ASHRAE, the American Institute of Architects (AIA), the New Buildings Institute (NBI), the Illuminating Engineering Society of North America (IESNA) and the Department of Energy (DOE).

For more information on the *Advanced Energy Design Guide for Small Office Buildings* and other great ASHRAE references check out the ASHRAE Bookstore Website at [www.ashrae.org](http://www.ashrae.org) and then click on the link to the Bookstore.





# EDUCATION



## STUDENT TECHNICAL TOUR AT CHICAGO WINTER MEETING

**Where:** *Mary and Leigh Block Museum of Art*  
Northwestern University  
Evanston, Illinois

**Time:** 2-5 PM  
**Cost:** \$15

The Mary and Leigh Block Museum of Art is multi-faceted museum committed to providing excellence in the visual arts for the Northwestern University community and general public, both in their facility and on the Internet. The mixed use facility includes exhibition galleries, print and drawing center, archival storage, sculpture garden, auditorium, classrooms, library, and offices.

The Block Gallery student tour will be divided into three parts:

1. Technical presentation of the 2004 ASHRAE Excellence in Engineering Award winner highlighting the museum's HVAC system selection process addressing the Owner's major goals of:
  - · Preservation of archives in galleries with "flat line" temperature and relative humidity
    - · First Cost value
    - · Reliability
    - · Maintainability
    - · Energy Conservation
2. Tour of the gallery HVAC systems (cooling, heating, dehumidification, humidification, air distribution, filtration and controls)
3. Tour of the gallery exhibits



## ANNOUNCEMENTS



### ASHRAE/SMACNA COLORADO 2006 HVAC&R MECHANICAL EQUIPMENT & PRODUCT DIRECTORY

Available for purchase in mid January for \$45 a copy.

A complete list of available product lines and services makes this directory an invaluable resource! It includes current product and contact information for representatives, distributors, wholesalers, engineers, contractors and other related businesses within the HVAC&R industry.

Look for it at the monthly ASHRAE meeting or contact Ronnie Zimmerman, MKK Consulting Engineers at 303-796-6089 or [rzimmerman@mkkeng.com](mailto:rzimmerman@mkkeng.com).





# EMPLOYMENT LISTINGS



Position(s): Senior Design Build Engineer/ Design Build Engineer

Company: Murphy Company

Web Site: [www.murphynet.com](http://www.murphynet.com)

Main Phone: 303-371-6600

Fax: 303-371-6616

Address: 3790 Wheeling Street  
Denver, CO 80239

Contact: Kerry Mowlam

Contact Phone: 720-280-2314

Contact Email: [kmowlam@murphy-den.com](mailto:kmowlam@murphy-den.com)

More Info:

Founded in 1907, Murphy Company performs construction and engineering work in the industrial, commercial, municipal, and institutional markets. Although routinely an ENR top 25 Specialty Contractor, Murphy continues to be a privately held company.

Murphy Company has established relationships in the Colorado front range high technology and pharmaceutical markets, which leads to many negotiated design - build projects where your technical expertise is a marketplace differentiator, and would be valued by both our customers and the Company.

## **DESIGN BUILD ENGINEER in Denver**

We seek a Design-Build Engineer with experience at HVAC & Plumbing construction document production including calculations, layout, coordinate with other disciplines to include CAD drafting, survey of existing conditions and completion of construction drawings. Candidate must demonstrate themselves as a self starter, flexible and adaptable. College Mechanical Engineering Degree required. EIT required and working towards a PE license a plus. Minimum of 2 years design experience and prior construction experience a plus. Attention to detail is an absolute must and valuing the opinions of field personnel is essential.

## **SENIOR DESIGN BUILD ENGINEER in Denver**

We seek a Senior Design-Build Engineer with extensive experience in HVAC & Plumbing construction document production. Candidate will have a minimum of 10 years experience with the design of HVAC and plumbing systems serving institutional and commercial occupancies and must possess a thorough command of basis of design tasks such as load calculations, SD, DD, & CD







# EMPLOYMENT LISTINGS



design packages, equipment sizing, coordination with other design professionals. Candidate must be capable of authoritative verbal and written presentation of proposed solutions. Must be able to drive intensive, and well founded, design efforts with a sense of urgency, and extract needed design information from other design team members - while valuing the opinions of field personnel. Attention to detail is an absolute must. Colorado registration as Professional Engineer is a requirement.

Both positions offers the opportunity to mature your design skills by testing your ideas within a group of experienced estimators, project managers, and shop and field craft people - before the drawings go out. The candidates should be interested in improving their understanding of the construction cost, constructability, and schedule implications of different design choices.

This is an opportunity to join a dynamic, growth-oriented company that offers a highly competitive compensation and excellent benefits package, along with opportunities for personal and professional development. For immediate consideration, please forward your resume to [denverjobs@murphy-den.com](mailto:denverjobs@murphy-den.com). EOE.

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Position(s): We have multiple opportunities.  
Sales/Estimating  
IT/Programming/Graphics  
Install/Commissioning Technicians  
Company: Autocon Incorporated  
Main Phone: 303-286-8680  
Fax: 303-286-1848  
Address: 801 East 64<sup>th</sup> Ave.  
Denver, Co. 80229

Contact: Dean Koenig  
Contact Phone: 303-286-8680  
Contact Email: [controls2006@yahoo.com](mailto:controls2006@yahoo.com)

## More Info:

Autocon is an electrical contractor specializing in Temperature Control and Building Automation systems. We have been providing these services since 1980.

An excellent benefits package is provided.

Please phone, fax, or e-mail to explore how one of these opportunities may be appropriate for you.





# EMPLOYMENT LISTINGS



Position(s): Mechanical Engineer/Designer  
Company: Cator, Ruma & Associates  
Web Site: [cra@catorruma.com](mailto:cra@catorruma.com)  
Main Phone: 303-232-6200  
Fax: 303-233-3701  
Address: 1550 Dover St., Suite 2  
Lakewood, CO 80215

Contact: Bruce Appel  
Contact Phone: 303-232-6200  
Contact Email: [cra@catorruma.com](mailto:cra@catorruma.com)

## More Info:

Cator, Ruma & Associates is a mechanical and electrical consulting engineering firm that has enjoyed an excellent reputation for over 45 years. We are seeking a few experienced engineers/designers to join our team. Candidates should have a minimum of 5 years experience in commercial/institutional mechanical systems design. We can offer you an excellent salary, fully paid major medical, 401K, flex time and Friday afternoons off. Fax your resume, e-mail us, or visit our website at [www.catorruma.com](http://www.catorruma.com).

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Position(s): Mechanical Engineer, Electrical Engineer  
Company: Shaffer Baucom Engineering and Consulting  
Web Site: [www.sbengr.com](http://www.sbengr.com)  
Main Phone: 303-986-8200  
Fax: 303-986-8222  
Address: 7333 W. Jefferson Avenue

Contact: Ellie Dugle  
Contact Phone: 303-986-8200  
Contact Email: [edugle@sbengr.com](mailto:edugle@sbengr.com)

## Mechanical Engineer:

Shaffer Baucom Engineering and Consulting is seeking a Mechanical Engineer to join our team. Successful candidate will have 5+ years experience, preferably





# EMPLOYMENT LISTINGS



in a consulting engineering environment and be experienced in the design of HVAC and plumbing systems. Healthcare, Educational and Laboratory experience a plus. Bachelors Degree and PE required. Excellent compensation package. Please submit resume and salary history to [edugle@sbengr.com](mailto:edugle@sbengr.com).

## Electrical Engineer:

Shaffer Baucom Engineering and Consulting is seeking an Electrical Engineer to join our team. Successful candidate will have a minimum of 5+ years experience, preferably in a consulting engineering environment and be experienced in the design of building power, lighting and fire alarm systems. Healthcare, Educational and Laboratory experience a plus. Bachelors Degree and PE required. Excellent compensation package. Please submit resume and salary history to [edugle@sbengr.com](mailto:edugle@sbengr.com).

---

Position(s): HVAC Project Engineer  
Company: The Ballard Group, Inc.  
Main Phone: 303 988 4514  
Fax: 303 988 4517  
Address: 2525 S. Wadsworth Blvd.  
Suite 200  
Lakewood, CO 80227

Contact: Steve Franz  
Contact Phone: 303 988 4514  
Contact Email: [sfranz@theballardgroup.com](mailto:sfranz@theballardgroup.com)

## More Info:

The ideal candidate will have a minimum of 4 years HVAC design experience and enjoys working on a wide variety of project types. The Ballard Group is an HVAC design firm with 20 employees. We have been in business since 1978 and work primarily on healthcare, education and fitness center projects.





# MEMBERSHIP PROMOTION



Welcome to December's edition of "The Membership Promotion Page." Please take a close look at the chapter's roster located at [www.rockymtnashrae.com](http://www.rockymtnashrae.com) for the following:

1. If you are a member of ASHRAE (student, associate, member, etc.) your name should be included within the roster.
2. If you have requested that your contact address be your residential address, I have only included your name and the city and state of your residence.
3. If you have requested that your contact address be your business address, I have included your name, the business name and mailing address, and your email address.
4. If a "0" appears where your email address should be, ASHRAE does not have an email address for you assuming your contact address is your business address.
5. Your name appears in the same format ASHRAE has it recorded. I have not attempted to add "Dr", "PE", "PhD" or other pertinent information that ASHRAE does not have.
6. If any of your information is incorrect, or if you want changes made to your information, please send an email to [larry@acemechanical.com](mailto:larry@acemechanical.com) and I will make the requested changes.
7. If you have been omitted from this list and want to know why, please send an email to [larry@acemechanical.com](mailto:larry@acemechanical.com) and I will research why ASHRAE is not including you. Common reasons for omission include human error and unpaid ASHRAE membership dues.

I hope everyone spends the holiday season surrounded by your closest friends and family.





NAME: \_\_\_\_\_  
 (LAST) (FIRST) (MI)

STATUS: RENEWAL\_\_\_\_ NEW MEMBER\_\_\_\_ ADDRESS CHANGE\_\_\_\_

PLEASE CIRCLE PREFERRED MAILING ADDRESS:

HOME ADDRESS & PHONE

BUSINESS NAME, ADDRESS & PHONE

\_\_\_\_\_  
 \_\_\_\_\_

\_\_\_\_\_  
 \_\_\_\_\_

p: \_\_\_\_\_

p: \_\_\_\_\_

Preferred email address: \_\_\_\_\_

Society Membership No.: \_\_\_\_\_

Name Tag (\$10.00) PAID? Y N

Name to appear on name tag as: \_\_\_\_\_

I WOULD LIKE TO BE CONTACTED ABOUT SERVING ON ONE OF THE FOLLOWING COMMITTEES OR FUNCTIONS (PLEASE CIRCLE).

- A. NEWSLETTER
- B. MEMBERSHIP
- C. MEETING ATTENDANCE
- D. EDUCATION
- E. GOLF
- F. CHAPTER HISTORIAN
- G. TECHNICAL SEMINARS

- H. RESEARCH FUND PROMOTIONS
- I. MONTHLY MEETING PROGRAMS
- J. PUBLICITY
- K. SPOUSE'S NIGHT / SOCIAL COMMITTEE
- L. COLORADO ENGINEERING COUNCIL
- M. GENERAL (COMMITTEE HELP)
- N. ENERGY COMMITTEE

PLEASE MAIL THIS INVOICE AND YOUR CHECK FOR \$35.00 + \$10.00 (PAYABLE TO ROCKY MOUNTAIN CHAPTER ASHRAE) TO THE ADDRESS BELOW. SOCIETY WILL INVOICE YOU FOR BOTH SOCIETY AND LOCAL DUES EVERY YEAR FOLLOWING THIS FIRST YEAR:

Larry Hodgins, 13271 Holly St #F, Thornton CO 80241

membership@rockymtnashrae.org



## FIRST CLASS

Chapter may not act for Society. Expressions,  
opinions, and comments within this newsletter should  
not be taken as those of the Chapter or Society.

Rocky Mountain Chapter of ASHRAE  
c/o Justin Dunkin  
CFM Company  
1495 S. Platte River Dr.  
Denver, CO 80223  
303-607-4444



## ACTIVITIES CALENDAR



For membership info or change of address contact: Larry Hodgins • Empire Gas • [lhodgins@empiregas.com](mailto:lhodgins@empiregas.com)

January 4, 2006

### **Past President's Night**

Topic: If I knew then, what I know Now

February 1, 2006

### **Spouse / Significant Other Night**

Tentative Topic: Comedy Show

March 1, 2006

TBD

April 5, 2006

TBD

May 3, 2006

TBD

Visit the new Rocky Mountain ASHRAE website:

[www.rockymtnashrae.com](http://www.rockymtnashrae.com)





Volume 47, Number 6

**FEBRUARY 2006**

Editor: Justin Dunkin

Visit the new Rocky Mountain ASHRAE website:  
[www.rockymtnashrae.com](http://www.rockymtnashrae.com)

**Date:** February 1, 2006

**Cost:** Rocky Mtn Chapter Members-\$25\*  
\*With Reservations Made Before Monday Noon

**Dinner Location:** Wynkoop Brewing Company  
1634 18th St.  
Denver, CO 80202  
(Downtown, Corner of 18<sup>th</sup> & Wynkoop)

Guests, Non-members or Without Reservation - \$30  
Students - \$20

**Time:** 5:30 Social Hour (Wynkoop)  
6:30 Dinner (Wynkoop)  
7:00 Program Begins (Wynkoop)

**RSVP: Jeremy Hollands**  
E-mail: [JDH@catorruma.com](mailto:JDH@catorruma.com)



## PRESIDENT'S MESSAGE



Welcome Members,

February is the month of Love and your local ASHRAE Chapter is trying to spread as much as possible with our Spouse / Significant other night on February 1<sup>st</sup> at the Wynkoop Brewery. What better way to say "I Love You" then showing your loved one all the fun and excitement that your local ASHRAE members have at our monthly meetings?

Our speakers will be Renée Azerbegi and Linda Morrison, from Ambient Energy, Inc. They will discuss with us how to save money on our utility bills utilizing the latest financial incentives available. That way we can ensure to lavish our loved ones even more than we already do with the savings we will realize from this information. Now that's ASHRAE love!

January was Past Presidents Night and I want to thank all those that attended that Rose Bowl night. Especially the panel of speakers that relayed what they have learned through the years and how ASHRAE has been part of that experience. Thank you Mr. Jim McFall, Mrs. Lynda Rodenberg, Mr. Michael Haughey, and Mr. Tim Moormeier.

Thank you for supporting your Rocky Mountain ASHRAE Chapter and I look forward to seeing everyone next Wednesday at the Wynkoop Brewery in Downtown Denver.

John D. Stumpf  
[john.stumpf@york.com](mailto:john.stumpf@york.com)  
President, Rocky Mountain Chapter ASHRAE





# ROCKY MOUNTAIN ROSTER



President .....John Stumpf.....john.stumpf@york.com

President Elect.....Kevin Parrot .....KevinP@trinity-mechanical.com

Vice President.....Brian Lynch .....brian.lynch@york.com

Secretary .....Scott Martin.....smartin@rmhgroup.com

Treasurer .....Jeremy Hollands .....jhollands@catorruma.com

Newsletter Editor .....Justin Dunkin .....justind@cfmcompany.com

Membership .....Larry Hodgins.....lhodgins@empiregas.com

Refrigeration .....Dave Rodenberg.....drodenberg@long.com

Historian.....Steve Maxson .....smaxson@sbengr.com

Technology Transfer .....Ken Urbanek.....kurbanek@mkkeng.com

Resource Promotions .....Kevin Parrot .....KevinP@trinity-mechanical.com

Web Master .....Kyle Manske .....kmanske@comfortsystemsusa.com

Education Chairman .....Kevin Ainsworth .....kainsworth@mcgrath-inc.com

Director .....Mark Jelinske .....mjelinske@catorruma.com

Director .....Kate Allen.....kate3222@msn.com

Past President .....Dave Rodenberg.....drodenberg@long.com





# FEBRUARY PROGRAM



**ASHRAE Dinner meeting      Spouse/Significant Other Night      February 1, 2006**

## ***New Incentives for Energy Efficiency and Renewable Energy Residential and Commercial Projects***

You don't have to be an ASHRAE member to want to save money. With the rising cost of utilities, we are all feeling a pinch in the pocket book. This month we are pleased to welcome Renée Azerbegi and Linda Morrison, from Ambient Energy, Inc., as our speakers to cover a subject both ASHRAE Members and our Significant Others will appreciate. Renée and Linda will discuss the latest financial incentives now available along the Front Range and across Colorado. Their presentation will cover how to attain all possible financial incentives for energy efficiency and solar projects, how Amendment 37 is being implemented, and about Federal programs included in the Energy Policy Act 2005 (EPAAct 2005). Right now is a great time to take advantage of these programs for both residential and commercial projects.

Renée Azerbegi is President of Ambient Energy, Inc. located in Golden, Colorado, a consulting company dedicated to providing sustainable and energy efficient solutions for buildings.. She has nine years of experience specializing in energy modeling, LEED green building rating documentation, life cycle costing, energy audits, feasibility studies, green specifications, and energy efficient mechanical design. Renée is 2005 President of the Colorado Renewable Energy Society (CRES), a LEED Accredited Professional, and a Certified Energy Manager. She is the chair of the Collaboration Committee of the Colorado Chapter of the US Green Building Council and the ASHRAE 2.8 Technical Advisory Committee Intersociety Liaison to the Green Building Initiative. She is Chair of the Local Organizing Committee for the 2006 American Solar Energy Society conference and is on the Colorado Challenge committee for the 2006 US Green Building Council, both of which will be held in Denver. Renée received a CRES Outstanding Service Award in 2005 for successfully chairing two consecutive CRES conferences.

Linda Morrison is a Senior Engineer at Ambient Energy, Inc. She has ten years of experience in facility audits for energy efficiency, operational efficiency, and sustainability, energy modeling, supply and demand side energy strategies, mechanical and electrical system efficient design, measurement and verification protocols, and pro-forma financial business case analysis. Linda is a member of the Colorado Association of Healthcare Engineering Directors (CAHED), the Association of Energy Engineers (AEE), and serves on the Colorado Renewable Energy Society (CRES). Linda's previous experience includes work at Johnson Controls consulting with client's on meeting their strategic facility objectives and budgets with custom turn-key design build solutions, project management, and managing a team of engineers working with clients across the West.

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Brian Lynch  
VP, Programs  
ASHRAE - Rocky Mountain Chapter

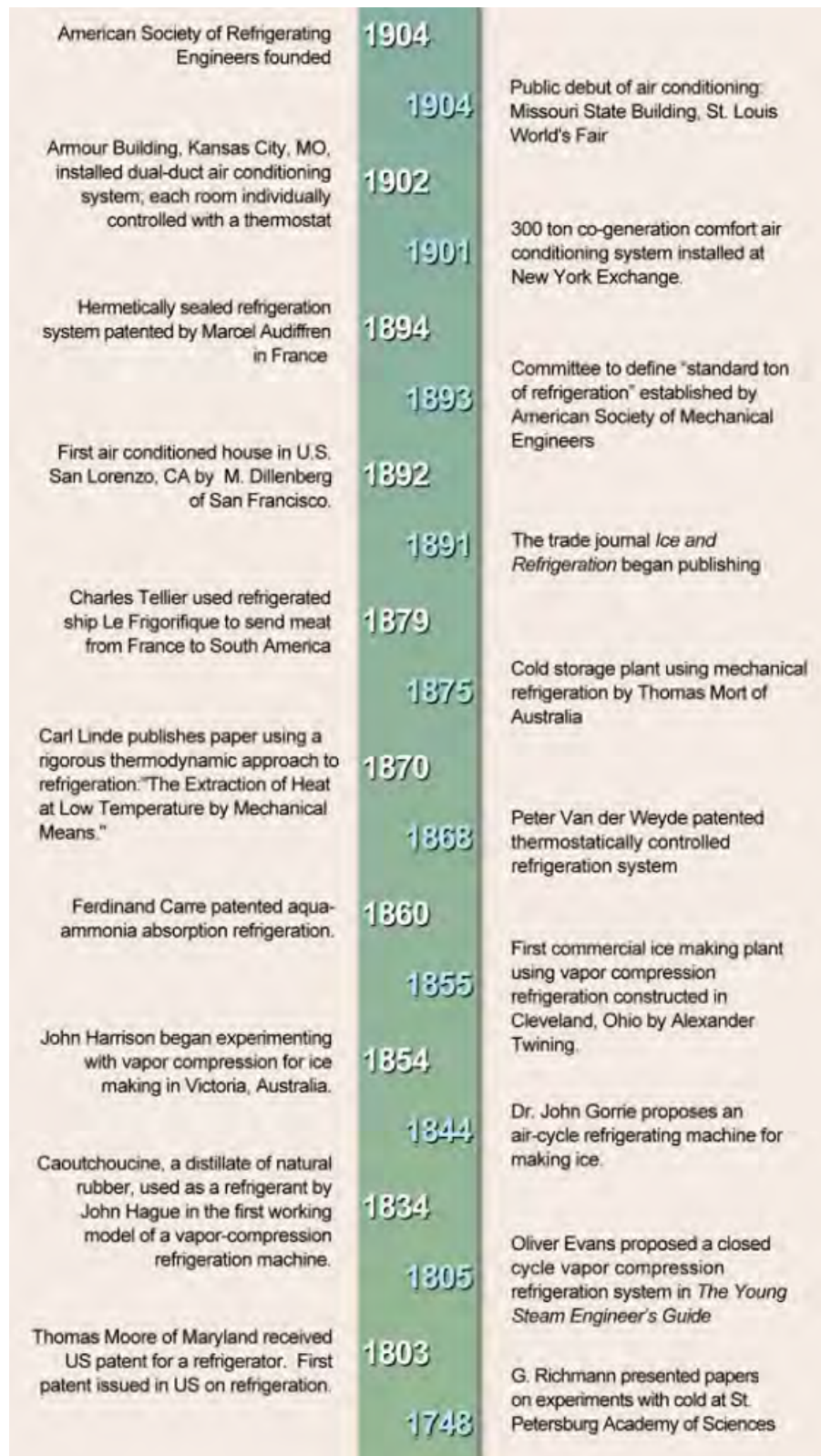




# ASHRAE HISTORY



## History of Refrigeration Timeline (1748-1904)

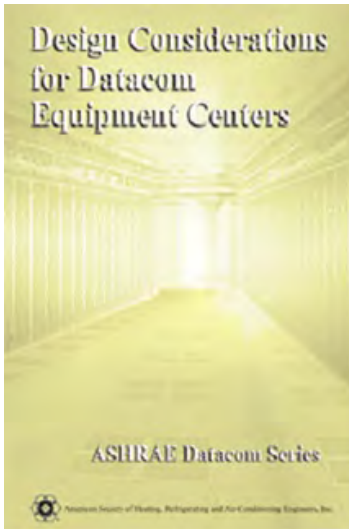




## The Latest in Technical, Energy, and Government Activities

### Design Needs of Datacom Facilities Addressed by ASHRAE

ATLANTA - An overview of the design needs for data centers and telecommunication facilities is available in a new publication from the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE).



*Design Considerations for Datacom Equipment Centers* provides an overview of the design needs, such as heat loads, of datacom facilities. The book is divided into two parts. Datacom Facility Basics includes chapters on datacom design criteria, HVAC load, computer room cooling, including both air and liquid cooling, and air distribution. Other Considerations includes chapters on ancillary spaces, contamination, acoustical noise emissions, structural and seismic design and testing, fire detection and suppression, commissioning, availability and redundancy, and energy efficiency.

The book is part of the ASHRAE Datacom Series, developed to provide a more comprehensive treatment of datacom cooling and related subjects. Other books in the series are ASHRAE's Thermal Guidelines for Data Processing Environments and Datacom Equipment Power Trends and Cooling Applications.

For more information on the new *Design Considerations for Datacom*

*Equipment Centers* publication and other great ASHRAE references check out the ASHRAE Bookstore Website at [www.ashrae.org](http://www.ashrae.org) and then click on the link to the Bookstore.

### Earn PDHs/CEUs from Your Desktop with Online Seminars from ASHRAE Learning Institute

In order to expand the availability of its course material, the ASHRAE Learning Institute makes selected courses available via online seminars that allow you to earn your continuing education credits and professional development hours at your computer with a live instructor leading the class and answering your questions in real time. Upon completion of each course, you will earn 3 PDHs/.3 CEUs or 3 AIA Learning Units (LUs).

Some of the online Seminars offered this Spring Include: Complying with ASHRAE Standard 90.1-2004 HVAC/Mechanical, Complying with Requirements of ASHRAE Standard 62.1-2004, and An Introduction to BACnet®

For schedules and registering information go to the ASHRAE website: [www.ashrae.org/onlinepds](http://www.ashrae.org/onlinepds)

### ASHRAE Technology Awards

It is never too early to submit your application for the Chapter ASHRAE Technology Awards. Short form applications will be due by April 19<sup>th</sup>, 2006. The applications can be obtained at the monthly meeting, by contacting CTTC Chair Ken Urbanek, or by downloading them from the ASHRAE website.

If you have any questions regarding Technical, Energy, and Government Activities with respect to ASHRAE please contact local Chapter Technology Transfer Committee Chair Ken Urbanek via e-mail at [kurbanek@mkkeng.com](mailto:kurbanek@mkkeng.com).





# ANNOUNCEMENTS



## ASHRAE HOCKEY NIGHT AT DU

That's right! It's time once again for the Annual ASHRAE/DU Hockey Night. This year's event will have the Mighty DU Pioneers battling the Minnesota State Snapperheads on Friday February 10 at 7:30 p.m. The game will be played at Magness Arena in the Ritchie Center at DU. Tickets for the game will cost \$17 for adults and \$11 for children 13 and under. As always, door prizes will be given out at the intermissions. So please come and join us for another fun filled night of DU Hockey.

Name: \_\_\_\_\_

Address: \_\_\_\_\_

\_\_\_\_\_

Tickets: Adults \_\_\_\_\_ X \$17 = \_\_\_\_\_

Children \_\_\_\_\_ X \$11 = \_\_\_\_\_

Total = \_\_\_\_\_

Please make checks payable to Rocky Mountain Chapter ASHRAE and send to:

Mike Day  
C/o M-E Engineers, Inc.  
P.O. Box 5740  
Avon, CO 81620

Ph. 970-949-6000, fax 970-949-1959





# ANNOUNCEMENTS



## **ASHRAE/SMACNA COLORADO 2006 HVAC&R MECHANICAL EQUIPMENT & PRODUCT DIRECTORY**

Available for purchase in mid January for \$45 a copy.

A complete list of available product lines and services makes this directory an invaluable resource! It includes current product and contact information for representatives, distributors, wholesalers, engineers, contractors and other related businesses within the HVAC&R industry.

Look for it at the monthly ASHRAE meeting or contact Ronnie Zimmerman, MKK Consulting Engineers at 303-796-6089 or [rzimmerman@mkkeng.com](mailto:rzimmerman@mkkeng.com).







# EMPLOYMENT LISTINGS



Position(s): 1 EE, 3 MEs  
Company: The RMH Group, Inc.  
Web Site: [www.rmhgroup.com](http://www.rmhgroup.com)  
Main Phone: 303 239 0909  
Fax: 303 312 4609  
Address: 12600 W Colfax Ave Suite A400  
Lakewood CO 80215

Contact: Jill Patterson (HR Manager)  
Contact Phone: 303 239 2761  
Contact Email: [jpatterson@rmhgroup.com](mailto:jpatterson@rmhgroup.com)

## More Info:

The RMH Group, a high-quality consulting engineering company, is looking for several above-average engineering candidates. RMH has been around for over 40 years serving national and international clients. In addition, we are one of the leading engineering companies for sustainable design. We currently have two divisions, commercial/institutional and industrial. If you like to learn, grow, and share your knowledge with a great team, this is the place for you!

We offer a competitive compensation package including flex schedule, medical, dental, vision, 401(k), recruitment bonuses, tuition assistance, generous paid time off including paid holidays and vacation/sick time, disability, life, supplemental life, flex plan, financial planning assistance, credit union membership, and a solid chance to advance yourself and your career. RMH is an EEO/AA, M/F/D/V employer.

## Electrical Engineer

We're looking for an electrical engineer with a BSEE and 2-5 years of hands-on design experience (preferably in AutoCAD) for our Industrial Process Division. Power/lighting/controls experience is very helpful. Good people skills are a definite plus. Please reference EEIPD106A.

## Mechanical Engineers

If you're a mechanical engineer with a BSME, 3-5 years of hands-on HVAC design experience and AutoCAD, we may have a place for you in our Building Systems Division. Experience with commercial and institutional projects (non-industrial) is needed, such as office buildings, schools, etc. Sustainable design experience is especially helpful. Experience with plumbing and fire protection is a plus and people skills are important. Please reference MEBSD106A.

We also need a mechanical engineer with a BSME and 1-2 years of HVAC hands-on design experience in AutoCAD for our Industrial Process Division. Please reference MEIPD106A.

Are you a driven mechanical engineer with 10-15 years of HVAC design and project management experience with projects such as laboratories/healthcare (particularly) and other institutional buildings? If so, we'd love to talk to you! A PE is required. Experience with plumbing and fire protection is a plus. Good client/owner interface and marketing skills are a must for this senior position which can lead to a principal/ownership role in the company. Please reference MEHC106A.







# EMPLOYMENT LISTINGS



Position: Mechanical Engineer  
Company: PCD Engineering Services, Inc.  
Web Site: [www.pcdengineering.com](http://www.pcdengineering.com)  
Main Phone: 303-678-1108  
Fax: 303-678-1142  
Address: 184 Wetterhorn Way Longmont CO 80501

Contact: Peter D'Antonio  
Contact Phone: 303-678-1108  
Contact Email: [peter@pcdengineering.com](mailto:peter@pcdengineering.com)

## More Info:

**PCD Engineering Services, Inc.** is a firm focused on the client and the environment offering sustainable mechanical/electrical design engineering, energy management, and integrated building system solutions.

Interested in working in a growing engineering firm? Interested in being a part of challenging, innovative projects? We are seeking talented individuals ready to contribute to a dynamic and fun working environment.

## Mechanical Engineer

Successful candidate will have 4+ years experience in the design of HVAC and plumbing systems. Candidate will be working on a wide variety of project types including new construction and facility renovations. Experience in energy efficient design and analysis a plus. Please submit resume and salary history to [peter@pcdengineering.com](mailto:peter@pcdengineering.com).

---

Position(s): Mechanical Engineer/Designer  
Company: Cator, Ruma & Associates  
Web Site: [cra@catorruma.com](mailto:cra@catorruma.com)  
Main Phone: 303-232-6200  
Fax: 303-233-3701  
Address: 1550 Dover St., Suite 2  
Lakewood, CO 80215

Contact: Bruce Appel  
Contact Phone: 303-232-6200  
Contact Email: [cra@catorruma.com](mailto:cra@catorruma.com)

## More Info:

If you are interested in working on technically challenging HVAC, plumbing and fire-protection design projects, we are interested in discussing career opportunities with you. We are hiring mechanical engineers and senior level designers with a minimum of 4 years experience in mechanical building systems design. We offer an excellent benefit package (salary, medical, 401K) with Friday afternoons off. Fax resumes to 303-233-3701 or email to [cra@catorruma.com](mailto:cra@catorruma.com).





# EMPLOYMENT LISTINGS



Position(s): Senior Design Build Engineer/ Design Build Engineer  
Company: Murphy Company  
Web Site: [www.murphynet.com](http://www.murphynet.com)  
Main Phone: 303-371-6600  
Fax: 303-371-6616  
Address: 3790 Wheeling Street  
Denver, CO 80239

Contact: Kerry Mowlam  
Contact Phone: 720-280-2314  
Contact Email: [kmowlam@murphy-den.com](mailto:kmowlam@murphy-den.com)

## More Info:

Founded in 1907, Murphy Company performs construction and engineering work in the industrial, commercial, municipal, and institutional markets. Although routinely an ENR top 25 Specialty Contractor, Murphy continues to be a privately held company.

Murphy Company has established relationships in the Colorado front range high technology and pharmaceutical markets, which leads to many negotiated design - build projects where your technical expertise is a marketplace differentiator, and would be valued by both our customers and the Company.

### **DESIGN BUILD ENGINEER in Denver**

We seek a Design-Build Engineer with experience at HVAC & Plumbing construction document production including calculations, layout, coordinate with other disciplines to include CAD drafting, survey of existing conditions and completion of construction drawings. Candidate must demonstrate themselves as a self starter, flexible and adaptable. College Mechanical Engineering Degree required. EIT required and working towards a PE license a plus. Minimum of 2 years design experience and prior construction experience a plus. Attention to detail is an absolute must and valuing the opinions of field personnel is essential.

### **SENIOR DESIGN BUILD ENGINEER in Denver**

We seek a Senior Design-Build Engineer with extensive experience in HVAC & Plumbing construction document production. Candidate will have a minimum of 10 years experience with the design of HVAC and plumbing systems serving institutional and commercial occupancies and must possess a thorough command of basis of design tasks such as load calculations, SD, DD, & CD design packages, equipment sizing, coordination with other design professionals. Candidate must be capable of authoritative verbal and written presentation of proposed solutions. Must be able to drive intensive, and well founded, design efforts with a sense of urgency, and extract needed design information from other design team members - while valuing the opinions of field personnel. Attention to detail is an absolute must. Colorado registration as Professional Engineer is a requirement.





# EMPLOYMENT LISTINGS



Both positions offers the opportunity to mature your design skills by testing your ideas within a group of experienced estimators, project managers, and shop and field craft people - before the drawings go out. The candidates should be interested in improving their understanding of the construction cost, constructability, and schedule implications of different design choices.

This is an opportunity to join a dynamic, growth-oriented company that offers a highly competitive compensation and excellent benefits package, along with opportunities for personal and professional development. For immediate consideration, please forward your resume to [denverjobs@murphy-den.com](mailto:denverjobs@murphy-den.com). EOE.

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Position(s): We have multiple opportunities.  
Sales/Estimating  
IT/Programming/Graphics  
Install/Commissioning Technicians  
Company: Autocon Incorporated  
Main Phone: 303-286-8680  
Fax: 303-286-1848  
Address: 801 East 64<sup>th</sup> Ave.  
Denver, Co. 80229

Contact: Dean Koenig  
Contact Phone: 303-286-8680  
Contact Email: [controls2006@yahoo.com](mailto:controls2006@yahoo.com)

## More Info:

Autocon is an electrical contractor specializing in Temperature Control and Building Automation systems. We have been providing these services since 1980.

An excellent benefits package is provided.

Please phone, fax, or e-mail to explore how one of these opportunities may be appropriate for you.





# MEMBERSHIP PROMOTION



Welcome to February edition of “The Membership Promotion Page.” Please take a close look at the chapter's roster located at [www.rockymtnashrae.com](http://www.rockymtnashrae.com) for the following:

1. If you are a member of ASHRAE (student, associate, member, etc.) your name should be included within the roster.
2. If you have requested that your contact address be your residential address, I have only included your name and the city and state of your residence.
3. If you have requested that your contact address be your business address, I have included your name, the business name and mailing address, and your email address.
4. If a “0” appears where your email address should be, ASHRAE does not have an email address for you assuming your contact address is your business address.
5. Your name appears in the same format ASHRAE has it recorded. I have not attempted to add “Dr”, “PE”, “PhD” or other pertinent information that ASHRAE does not have.
6. If any of your information is incorrect, or if you want changes made to your information, please send an email to [larry@acemechanical.com](mailto:larry@acemechanical.com) and I will make the requested changes.
7. If you have been omitted from this list and want to know why, please send an email to [larry@acemechanical.com](mailto:larry@acemechanical.com) and I will research why ASHRAE is not including you. Common reasons for omission include human error and unpaid ASHRAE membership dues.

I hope everyone spent the holiday season surrounded by your closest friends and family.





NAME: \_\_\_\_\_  
 (LAST) (FIRST) (MI)

STATUS: RENEWAL\_\_\_\_ NEW MEMBER\_\_\_\_ ADDRESS CHANGE\_\_\_\_

PLEASE CIRCLE PREFERRED MAILING ADDRESS:

HOME ADDRESS & PHONE

BUSINESS NAME, ADDRESS & PHONE

\_\_\_\_\_  
 \_\_\_\_\_

\_\_\_\_\_  
 \_\_\_\_\_

p: \_\_\_\_\_

p: \_\_\_\_\_

Preferred email address: \_\_\_\_\_

Society Membership No.: \_\_\_\_\_

Name Tag (\$10.00) PAID? Y N

Name to appear on name tag as: \_\_\_\_\_

I WOULD LIKE TO BE CONTACTED ABOUT SERVING ON ONE OF THE FOLLOWING COMMITTEES OR FUNCTIONS (PLEASE CIRCLE).

- A. NEWSLETTER
- B. MEMBERSHIP
- C. MEETING ATTENDANCE
- D. EDUCATION
- E. GOLF
- F. CHAPTER HISTORIAN
- G. TECHNICAL SEMINARS

- H. RESEARCH FUND PROMOTIONS
- I. MONTHLY MEETING PROGRAMS
- J. PUBLICITY
- K. SPOUSE'S NIGHT / SOCIAL COMMITTEE
- L. COLORADO ENGINEERING COUNCIL
- M. GENERAL (COMMITTEE HELP)
- N. ENERGY COMMITTEE

PLEASE MAIL THIS INVOICE AND YOUR CHECK FOR \$35.00 + \$10.00 (PAYABLE TO ROCKY MOUNTAIN CHAPTER ASHRAE) TO THE ADDRESS BELOW. SOCIETY WILL INVOICE YOU FOR BOTH SOCIETY AND LOCAL DUES EVERY YEAR FOLLOWING THIS FIRST YEAR:

Larry Hodgins, 13271 Holly St #F, Thornton CO 80241

membership@rockymtnashrae.org



## FIRST CLASS

Chapter may not act for Society. Expressions,  
opinions, and comments within this newsletter should  
not be taken as those of the Chapter or Society.

Rocky Mountain Chapter of ASHRAE  
c/o Justin Dunkin  
CFM Company  
1495 S. Platte River Dr.  
Denver, CO 80223  
303-607-4444



## ACTIVITIES CALENDAR



For membership info or change of address contact: Larry Hodgins • Empire Gas • [lhodgins@empiregas.com](mailto:lhodgins@empiregas.com)

February 1, 2006

**Spouse / Significant Other Night**

Topic: ***New Incentives for Energy Efficiency and  
Renewable Energy Residential and Commercial  
Projects***

March 1, 2006

HVAC Equipment Failures: How and Why

April 5, 2006

TBD

May 3, 2006

TBD / Tour

Visit the new Rocky Mountain ASHRAE website:

[www.rockymtnashrae.com](http://www.rockymtnashrae.com)



Volume 47, Number 7

**MARCH 2006**

Editor: Justin Dunkin

Visit the new Rocky Mountain ASHRAE website:  
[www.rockymtnashrae.com](http://www.rockymtnashrae.com)

|                         |                                                                                                                  |                                                                                                  |                                                                               |
|-------------------------|------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------|
| <b>Date:</b>            | March 1, 2006                                                                                                    | <b>Cost:</b>                                                                                     | Rocky Mtn Chapter Members-\$25*<br>*With Reservations Made Before Monday Noon |
| <b>Dinner Location:</b> | Wynkoop Brewing Company<br>1634 18th St.<br>Denver, CO 80202<br>(Downtown, Corner of 18 <sup>th</sup> & Wynkoop) |                                                                                                  | Guests, Non-members or Without Reservation - \$30<br>Students - \$20          |
| <b>Time:</b>            | 5:30 Social Hour (Wynkoop)<br>6:30 Dinner (Wynkoop)<br>7:00 Program Begins (Wynkoop)                             | <b>RSVP: Jeremy Hollands</b><br>E-mail: <a href="mailto:JDH@catorruma.com">JDH@catorruma.com</a> |                                                                               |



## MARCH PROGRAM



### Stratification and Mixing Designing Good Mixing Systems

This month we are pleased to welcome Mr. Ross Lindgren as our speaker to discuss Stratification and Mixing. ASHRAE has no performance standards for Air mixing systems. Ross' presentation will cover the problems created by stratification including uneven outdoor air distribution, freeze stat trip outs, and mixed air sensor error. The presentation will also define the amount of mixing required to eliminate the stratification and the related problems. The emphasis will be on how properly designed mixing systems can enhance the reliability and efficiency of the HVAC system.

As the President of Blender Products, Inc. Ross has over 20 years experience designing new and analyzing existing mixing systems for a wide variety of commercial HVAC and industrial process applications. Ross is a graduate Mechanical Engineer and a long time member of ASHRAE.

See you at the Wynkoop!

Brian Lynch  
VP, Programs  
Rocky Mountain Chapter of ASHRAE





# ROCKY MOUNTAIN ROSTER



President .....John Stumpf.....john.stumpf@york.com

President Elect.....Kevin Parrot .....KevinP@trinity-mechanical.com

Vice President.....Brian Lynch .....brian.lynch@york.com

Secretary .....Scott Martin.....smartin@rmhgroup.com

Treasurer .....Jeremy Hollands .....jhollands@catorruma.com

Newsletter Editor .....Justin Dunkin .....justind@cfmcompany.com

Membership .....Larry Hodgins.....lhodgins@empiregas.com

Refrigeration .....Dave Rodenberg.....drodenberg@long.com

Historian.....Steve Maxson .....smaxson@sbengr.com

Technology Transfer .....Ken Urbanek.....kurbanek@mkkeng.com

Resource Promotions .....Kevin Parrot .....KevinP@trinity-mechanical.com

Web Master .....Kyle Manske .....kmanske@comfortsystemsusa.com

Education Chairman .....Kevin Ainsworth .....kainsworth@mcgrath-inc.com

Director .....Mark Jelinske .....mjelinske@catorruma.com

Director .....Kate Allen.....kate3222@msn.com

Past President .....Dave Rodenberg.....drodenberg@long.com





# PRESIDENT'S MESSAGE



Welcome Members,

March is already here and we know that it's the snowiest month in Colorado, so get your skis out and enjoy. We have a lot to discuss this month with ASHRAE Research, Technical Award submissions are coming up, ASHRAE Satellite Broadcast on sustainability is coming up in April, and we can't forget about the upcoming Technical conference in May. We have a lot going on and look forward to your participation, as you know this is a volunteer organization that is funded solely by its members so be aware that we will be calling to get your support both financially as well as technically.

This month we are pleased to welcome Mr. Ross Lindgren as our speaker to discuss Stratification and Mixing. ASHRAE has no performance standards for Air mixing systems. The emphasis will be on how properly designed mixing systems can enhance the reliability and efficiency of the HVAC system.

I would like to acknowledge Mike Day for putting together another successful DU Hockey Night the Mighty Pioneers beating up on the Minnesota State 7-4. Also, notable mention goes to Kevin Ainsworth for stepping in and providing the assist to a winning night. Also, on another note regarding hockey and skating, thanks to Bill Mele for putting together another great event on the lake in Evergreen.

I want to say thank you to our speakers Renée Azerbegi and Linda Morrison, from Ambient Energy, Inc. for coming in to discuss this topic and I know that everyone came away with a better understanding of rebates and how to access this information.

Thank you for supporting your Rocky Mountain ASHRAE Chapter and I look forward to seeing everyone next Wednesday at the Wynkoop Brewery in Downtown Denver.

John D. Stumpf  
[john.stumpf@york.com](mailto:john.stumpf@york.com)  
President, Rocky Mountain Chapter ASHRAE





## The Latest in Technical, Energy, and Government Activities



### ASHRAE Publishes Principles of HVAC

ATLANTA A new textbook designed to also be used as a reference manual that allows engineers to build on their knowledge of HVAC&R design procedures and methods has been published by ASHRAE. "Principles of Heating, Ventilating and Air-Conditioning builds on much of the basic information in the ASHRAE 2005 Handbook, Fundamentals, which includes many significant changes," said co-author Ron Howell, Ph.D., P.E. "It serves as a good source for many of the procedures or methods used in HVAC&R design."

*Principles of HVAC* elaborates on the use of technical guidance in the Fundamentals Handbook, such as the new radiant time series (RTS) methodology, which includes enhanced treatment of RTS procedures for non-residential cooling and heating loads; a new chapter on residential cooling and heating loads; inclusion of the new ventilation air procedure from ASHRAE 62.1-2004; and changes in the format and quantity of design weather conditions around the world.

For more information on the new *Principles of HVAC* publication and other great ASHRAE references check out the ASHRAE Bookstore Website at [www.ashrae.org](http://www.ashrae.org) and then click on the link to the Bookstore.

### ASHRAE Technology Awards Many Rocky Mountain Chapter Awards Available

Each year the Society reviews applications for Technology Awards in seven categories: Commercial Buildings; Institutional Buildings; Health Care Facilities; Industrial Facilities or Processes; Public Assembly; Residential and Alternative or Renewable Energy Use. All categories carry awards for both new and existing buildings in first, second and third place. Many awards are available, including multiple Rocky Mountain Chapter awards, and the Society encourages ASHRAE members to submit any project they have been involved in which demonstrates technological achievements. These awards recognize ASHRAE members who design innovative systems, and communicate the designs to other members as well as building and facility owners.

To apply for an award, fill out the Chapter Technology Award Application (Short Form), available at the monthly meeting or contact CTTC Chair Ken Urbanek at [kurbanek@mkkeng.com](mailto:kurbanek@mkkeng.com) for an application. The awards focus on five criteria: Energy Efficiency; Indoor Air Quality; Innovation; Operation and Maintenance; Cost Effectiveness and Environmental Impact. Not all scoring topics must apply to the project to be considered for an award. Winners in each category will receive a local award and then they will be submitted to the Regional CTTC Vice Chair and can be considered for International awards, or the Engineering Award of Excellence. All applications are due by April 19th, 2006 and local recipients of the Technology Award will be announced at the final Chapter meeting in May.

### Free ASHRAE Satellite Broadcast "Sustainability and the Building Environment"

Information regarding building sustainability principles, practices, and emerging concepts will be presented in this FREE program sponsored by ASHRAE's Chapter Technology Transfer Committee see our insert in this month's newsletter.

If you have any questions regarding Technical, Energy, and Government Activities with respect to ASHRAE please contact local Chapter Technology Transfer Committee Chair Ken Urbanek via e-mail at [kurbanek@mkkeng.com](mailto:kurbanek@mkkeng.com).





# TECHNOLOGY



## Free ASHRAE Satellite Broadcast/Webcast "Sustainability and the Building Environment"

**April 19, 2006 11:00 A.M. 2:00 P.M. MDT**

Information regarding building sustainability principles, practices, and emerging concepts will be presented in this **FREE** program sponsored by ASHRAE's Chapter Technology Transfer Committee. Visit <http://www.ashrae.org/greenbuildingsbroadcast> for complete details.

### How to Participate

You may host a Satellite Broadcast/Webcast for your colleagues, you may register to view the Satellite Broadcast/Webcast at a local site (see below), or you may register to view the Webcast on you PC.

### Local Broadcast/Webcast Sites Hosted By Local ASHRAE Sponsor's

- § **North Denver Metro Area Empire Gas & Electric Equipment Co** 4900 Osage St., Suite 100, Denver, CO
- § **Central Denver Metro Area (Tentatively) TRANE** 445 Bryant Street Unit 5, Denver, CO
- § **South Denver Metro Area MKK Consulting Engineers, Inc.** 7600 East Orchard Rd. Suite 250S, Greenwood Village, CO

As seating is limited please RSVP to Ken Urbanek at [kurbanek@mkkeng.com](mailto:kurbanek@mkkeng.com) by April 10, 2006 with your preferred viewing site. Participants of Local Broadcast Sites are also encouraged to register online.

### Tentative Broadcast Topics

- § **"Sustainability: What Does It Mean and Why Is It important?"**  
Hal Levin, Fellow ASHRAE, Research Architect, Building Ecology Research Group, Santa Cruz, California
- § **"If it's Not Energy Efficient, It's not Sustainable: How to Ensure Top Energy Performance in Green Buildings"**  
Jean Lupinacci, Director, ENERGY STAR® Commercial and Industrial Branch, Climate Protection Partnerships Division, U.S. Environmental Protection Agency
- § **"Integrated Design for Sustainability"**  
Malcolm Lewis, Ph.D., P.E., President, CTG Energetics, Irvine, California
- § **"Better by Design Project Studies"**  
Kevin Hydes, P.E., P. Eng., Vice President, Sustainable Practice, Stantec, Montreal, Canada
- § **"Green Buildings and Sustainable Communities A Developer's Perspective"**  
Joe Van Belleghem, Partner, Windmill Developments, Victoria, Canada

### New National ASHRAE Membership Discount

Non-member participants will be given a \$50 discount for applying for national ASHRAE membership. A special membership application will be available at satellite broadcast sites or by request at 678-539-1139.

### Registration

Online registration for Satellite Broadcast Site Coordinators and Webcast Participants will begin March 1, 2006, at <http://www.ashrae.org/greenbuildingsbroadcast>. There is no fee for registration. If you have any questions contact local Chapter Technology Transfer Committee Chair Ken Urbanek via e-mail at [kurbanek@mkkeng.com](mailto:kurbanek@mkkeng.com) or call at 303-796-6000.





## RESOURCE PROMOTIONS



### ASHRAE Research Program Hits \$50 Million Milestone

The following is part of a recent press release issued by ASHRAE.

ATLANTA - With approval of projects at the Society's 2006 Winter Meeting, ASHRAE has funded \$50 million in research since the merger of its two predecessor societies in 1959.

"ASHRAE research furthers technology to help keep indoor environments comfortable and productive, deliver healthy food to consumers and preserve the natural environment," Lee Burgett, P.E., ASHRAE president, said. "Only an organization such as ASHRAE has the continuity, the ability to generate research funding, and the expertise to attract researchers from disparate backgrounds and institutions. Only ASHRAE provides a forum to integrate their knowledge and transfer that knowledge to the industry to advance the science of engineering and the art of human comfort."

The first project contracted by ASHRAE was a study of condensing refrigerants in horizontal and inclined tubes at Kansas State University for \$7,600. Since that time, ASHRAE has funded some 700 projects. A complete listing of the projects funded since 1960 can be viewed at [www.ashrae.org/research](http://www.ashrae.org/research).



## RESOURCE ANNOUNCEMENTS



### ASHRAE/SMACNA COLORADO 2006 HVAC&R MECHANICAL EQUIPMENT & PRODUCT DIRECTORY

Available for purchase in NOW for \$45 a copy.

A complete list of available product lines and services makes this directory an invaluable resource! It includes current product and contact information for representatives, distributors, wholesalers, engineers, contractors and other related businesses within the HVAC&R industry.

Look for it at the monthly ASHRAE meeting or contact Ronnie Zimmerman, MKK Consulting Engineers at 303-796-6089 or [rzimmerman@mkkeng.com](mailto:rzimmerman@mkkeng.com).





# ANNOUNCEMENTS



## The Rocky Mountain Chapter of ASHRAE Presents...

### “Research 2 Reality” The 14th Annual Technical Conference & Vendor Expo

**Friday, May 12, 2006**  
Sheraton Denver West Hotel  
360 Union Blvd. in Lakewood

Featuring:

- Keynote Presentation by Jim Fields, Director at Large ASHRAE Society Board of Directors
- Four Additional Seminar Tracks featuring 24 different topics
- Featured presentations on: HVAC Fundamentals, Advanced Topics, Building Automation, Energy Efficient Design and Energy Retrofit Case Studies, ASHRAE Standards, Building Codes
- Half-day and full-day passes available
- Company passes may be shared by more than one person
- PDH Credits available (slight additional cost for certificate)

Who should attend?

Architects, Engineers, Sales People, Contractors, Building Owners, Managers, Operators, and Students

Denver Location: Sheraton Denver West Hotel  
**360 Union Blvd, Lakewood, CO 80228**

Time: 7:30 AM to 4:30 PM

Cost: \$110.00 full day, \$60.00 half day (lunch not included) if received by May 5, 2006  
\$125.00 full day, \$65.00 half day (lunch not included) if received May 6, 2006 or later

Individual or company registrations available

10% Discount available for five or more passes for one company

Net proceeds to benefit **ASHRAE Scholarship and Research**

For additional information, contact: Brian Lynch at [brian.lynch@york.com](mailto:brian.lynch@york.com)

Program, Seminars, and Speakers subject to change





# REGISTRATION



## REGISTRATION FORM

14th Annual Technical Conference

Friday, May 12, 2006

Sheraton Hotel Denver West 360 Union Boulevard, Lakewood CO 80228

### "Research 2 Reality"

Presented by:

**The ASHRAE Rocky Mountain Chapter**

*Register by May 5, 2006 to ensure space availability.*

*Checks received after May 6th (or walk-ins the day of the seminar) will be accommodated pending space availability.*

Please photocopy this form for additional attendees and for your records.

#### Individual Registration:

Your Name \_\_\_\_\_ Title \_\_\_\_\_

Company \_\_\_\_\_

Mailing Address \_\_\_\_\_

Phone \_\_\_\_\_ Fax \_\_\_\_\_

#### Company Registration:

Company \_\_\_\_\_

Mailing Address \_\_\_\_\_

Phone \_\_\_\_\_ Fax \_\_\_\_\_

#### Seminar Preference: (This is for space allocation only. You may attend any seminar during the conference.)

Check Your First and Second Preference

**HVACR Fundamentals, Basics**

**HVACR Fundamentals, Advanced Topics**

**Energy and Environment**

**Building Automation**

**Please register me for...**

**Please register my company for... \_\_\_\_\_ passes.**

Check Your Preference

Full day @ \$110.00, (Lunch included), (Total Number) \_\_\_\_\_

1/2 day at \$60.00, (Lunch is not included), (Total Number) \_\_\_\_\_

Morning Session

Afternoon Session

**Late Registration, received after after May 5, 2006, will be:**

**\$125.00, (includes lunch), \$65.00 1/2 day, (no lunch)**

10% Discount for 5 or more Company Passes

**Enclosed please find a check for: \$ \_\_\_\_\_ Mastercard/Visa total: \$ \_\_\_\_\_**

Please Make Checks payable to Rocky Mountain Chapter ASHRAE

MC# \_\_\_\_\_ Cardholder Name \_\_\_\_\_ Exp Date: \_\_\_\_\_

VISA# \_\_\_\_\_ Cardholder Name \_\_\_\_\_ Exp Date: \_\_\_\_\_

Please mail check and registration form to:

**Chris Huff - York**

**5855 Stapleton Drive North, Unit A-155**

**Denver, CO 80216**

**Phone: 720-889-1500 Fax: 720-889-1519**

**e-mail: [chris.huff@york.com](mailto:chris.huff@york.com)**

**For questions please contact: Brian Lynch, York International, [brian.lynch@york.com](mailto:brian.lynch@york.com) or fax: 720-889-1519**







# EMPLOYMENT LISTINGS



Position: HVAC Project Engineer  
Company: The Ballard Group, Inc.  
Web Site: [www.theballardgroup.com](http://www.theballardgroup.com)  
Main Phone: 303 988 4514  
Fax: 303 988 4517  
Address: 2525 S. Wadsworth Blvd.  
Suite 200  
Lakewood, CO 80227

Contact: Steve Franz  
Contact Phone: 303 988 4514  
Contact Email: [sfranz@theballardgroup.com](mailto:sfranz@theballardgroup.com)

## More Info:

The ideal candidate will have a minimum of 4 years HVAC design experience and enjoys working on a wide variety of project types. The Ballard Group is an HVAC design firm with 20 employees. We have been in business since 1978 and work primarily on healthcare, education and fitness center projects.

---

Company: EMC Engineers, Inc.  
Web Site: [www.emcengineers.com](http://www.emcengineers.com)  
Main Phone: 303-974-1200  
Fax: 303-974-1239  
Address: 143 Union Blvd, Suite 350  
Lakewood, CO 80228  
Contact: Don Davenport  
Contact Phone: 303-974-1219  
Contact Email: [ddavenport@emcengineers.com](mailto:ddavenport@emcengineers.com) (for all positions below)

Company Background - EMC Engineers has specialized in improving building operations and energy efficient building design and performance for 30 years. We provide commissioning, retro-commissioning, energy analysis/modeling, sustainable design and turn-key design/build services for a full range of clients including government, commercial, utility, institutional, K-12, and industrial. Our services focus on HVAC and control systems, electrical lighting, lighting, daylighting, and other mechanical systems such as geo-exchange, evaporative cooling and other low energy concepts. Substantial revenue growth in our core business areas has resulted in multiple position opportunities in our commissioning, energy, sustainable design, and design/build teams. EMC provides our services for clients throughout the US, so ability to travel periodically will be required. EMC currently has 5 offices nationwide. Positions are available in our Colorado office and in our Southern California office.

## **Position(s): Junior and Staff Commissioning Engineers (Colorado and California)**

EMC needs motivated Junior and Staff engineers to join our commissioning team. Junior engineers should possess 0 to 2 years of experience and Staff Engineers should possess 4 to 8 years of experience, with B.S.





# EMPLOYMENT LISTINGS



in Architectural or Mechanical Engineering (non-degreed persons may be considered given an equivalent amount of field experience in HVAC and controls systems). Candidates must possess strong communication skills, strong analytical capability, good contractor relationship skills, “hands on” operations interest, including experience with energy simulation modeling and system testing. Technical interest in HVAC and control systems troubleshooting, assessment, testing, programming, and commissioning are expected. Experience or strong interest in high performance buildings, sustainable design, LEED projects, and building envelope or electrical systems would be considered a "plus." Junior engineer positions in EMC also provide exposure to energy modeling and sustainable design project tasks, so a desire to execute differing kinds of engineering work will be required.

**Position(s): Junior and Staff Energy Engineers (Colorado)**

EMC needs motivated Junior and Staff engineers to join our energy team. Junior engineers should possess 0 to 4 years of experience and Staff Engineers should possess 4 to 8 years of experience, with B.S. or M.S. in Architectural or Mechanical Engineering, and either a P.E. or working toward P.E. for Staff level candidates. Candidates must be conscientious, with strong analytical capability (thermodynamics, heat transfer, daylighting) including experience with energy simulation modeling and HVAC system troubleshooting and assessment. Experience or strong interest in high performance buildings, sustainable design, LEED projects, and building envelope or electrical systems would be considered a "plus." Junior positions will also provide exposure to design and commissioning projects periodically, so a desire to execute differing assignments will be required.

**Position(s): Junior and Staff Mechanical Design Engineers (Colorado)**

We are looking for motivated Junior and Staff level mechanical design engineers to join our mechanical design team. Successful Junior candidates should possess 0 to 4 years of experience, successful Staff level candidates should possess 4 to 8 years of experience. A B.S. in Mechanical or Architectural Engineering, and either a P.E. or working toward P.E. for Staff level candidates. Candidates must possess strong analytical skills, good team skills, and thorough technical understanding of mechanical system analysis, design, and specifications. Technical focus for this position will be work in HVAC, plumbing and control systems. Experience with high performance buildings, sustainable design, and LEED projects, while not mandatory, would be considered a "plus." Junior positions will also provide exposure to energy modeling, sustainable design, and commissioning project tasks, so a desire to execute differing kinds of engineering work will be required.





# EMPLOYMENT LISTINGS



## **Position(s): Staff Electrical Engineer (Colorado)**

We are looking for an electrical engineer to join our team. Successful Staff level candidates should possess 4 to 8 years of experience. A B.S. or M.S. in Electrical Engineering, and either a P.E. or working toward P.E. Candidates must possess strong analytical skills, good team skills, and thorough technical understanding of electrical system analysis, design, and specifications. Technical focus for this position will be work in lighting, daylighting, and power distribution in buildings. Experience with high performance buildings, sustainable design, and LEED projects, would be considered a "plus." This position will also support assigned tasks in our energy and commissioning teams, so ability to be flexible in work assignments is required.

## **Position(s): Design/Build Project Manager (Colorado)**

We are looking for strong project manager to join our design/build services unit. Successful candidates should possess a minimum of 10 years of full spectrum project management experience (energy assessments, design, construction oversight, and commissioning) with a B.S. in Architectural or Mechanical Engineering or Construction Engineering or for a non-degreed person, an equivalent amount of experience. P.E. or working toward a P.E. is a plus. Candidates must possess strong communication skills, outstanding client relationship building skills, full understanding of the complete design/build delivery process for energy improvement projects, good contractor relationship skills, "hands on" operations interest, and ability to be flexible with multiple project work assignments, including understanding energy modeling, design, and system testing. Technical excellence in HVAC and control systems troubleshooting, assessment, testing, programming, and commissioning are expected. Experience with high performance buildings, sustainable design, LEED projects, and building envelope or electrical systems, and energy savings performance contracting would be considered a "plus."

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Position(s): 1 EE, 3 MEs  
Company: The RMH Group, Inc.  
Web Site: [www.rmhgroup.com](http://www.rmhgroup.com)  
Main Phone: 303 239 0909  
Fax: 303 312 4609  
Address: 12600 W Colfax Ave Suite A400  
Lakewood CO 80215

Contact: Jill Patterson (HR Manager)  
Contact Phone: 303 239 2761  
Contact Email: [jpatterson@rmhgroup.com](mailto:jpatterson@rmhgroup.com)





# EMPLOYMENT LISTINGS



## More Info:

The RMH Group, a high-quality consulting engineering company, is looking for several above-average engineering candidates. RMH has been around for over 40 years serving national and international clients. In addition, we are one of the leading engineering companies for sustainable design. We currently have two divisions, commercial/institutional and industrial. If you like to learn, grow, and share your knowledge with a great team, this is the place for you!

We offer a competitive compensation package including flex schedule, medical, dental, vision, 401(k), recruitment bonuses, tuition assistance, generous paid time off including paid holidays and vacation/sick time, disability, life, supplemental life, flex plan, financial planning assistance, credit union membership, and a solid chance to advance yourself and your career. RMH is an EEO/AA, M/F/D/V employer.

## **Electrical Engineer**

We're looking for an electrical engineer with a BSEE and 2-5 years of hands-on design experience (preferably in AutoCAD) for our Industrial Process Division. Power/lighting/controls experience is very helpful. Good people skills are a definite plus. Please reference EEIPD106A.

## **Mechanical Engineers**

If you're a mechanical engineer with a BSME, 3-5 years of hands-on HVAC design experience and AutoCAD, we may have a place for you in our Building Systems Division. Experience with commercial and institutional projects (non-industrial) is needed, such as office buildings, schools, etc. Sustainable design experience is especially helpful. Experience with plumbing and fire protection is a plus and people skills are important. Please reference MEBSD106A.

We also need a mechanical engineer with a BSME and 1-2 years of HVAC hands-on design experience in AutoCAD for our Industrial Process Division. Please reference MEIPD106A.

Are you a driven mechanical engineer with 10-15 years of HVAC design and project management experience with projects such as laboratories/healthcare (particularly) and other institutional buildings? If so, we'd love to talk to you! A PE is required. Experience with plumbing and fire protection is a plus. Good client/owner interface and marketing skills are a must for this senior position which can lead to a principal/ownership role in the company. Please reference MEHC106A.





# EMPLOYMENT LISTINGS



Position: Mechanical Engineer  
Company: PCD Engineering Services, Inc.  
Web Site: [www.pcdengineering.com](http://www.pcdengineering.com)  
Main Phone: 303-678-1108  
Fax: 303-678-1142  
Address: 184 Wetterhorn Way Longmont CO 80501

Contact: Peter D'Antonio  
Contact Phone: 303-678-1108  
Contact Email: [peter@pcdengineering.com](mailto:peter@pcdengineering.com)

## More Info:

**PCD Engineering Services, Inc.** is a firm focused on the client and the environment offering sustainable mechanical/electrical design engineering, energy management, and integrated building system solutions.

Interested in working in a growing engineering firm? Interested in being a part of challenging, innovative projects? We are seeking talented individuals ready to contribute to a dynamic and fun working environment.

## Mechanical Engineer

Successful candidate will have 4+ years experience in the design of HVAC and plumbing systems. Candidate will be working on a wide variety of project types including new construction and facility renovations. Experience in energy efficient design and analysis a plus. Please submit resume and salary history to [peter@pcdengineering.com](mailto:peter@pcdengineering.com).

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Position(s): Mechanical Engineer/Designer  
Company: Cator, Ruma & Associates  
Web Site: [cra@catorruma.com](mailto:cra@catorruma.com)  
Main Phone: 303-232-6200  
Fax: 303-233-3701  
Address: 1550 Dover St., Suite 2  
Lakewood, CO 80215





# EMPLOYMENT LISTINGS



Contact: Bruce Appel  
Contact Phone: 303-232-6200  
Contact Email: cra@catorruma.com

**More Info:**

If you are interested in working on technically challenging HVAC, plumbing and fire-protection design projects, we are interested in discussing career opportunities with you. We are hiring mechanical engineers and senior level designers with a minimum of 4 years experience in mechanical building systems design. We offer an excellent benefit package (salary, medical, 401K) with Friday afternoons off. Fax resumes to 303-233-3701 or email to cra@catorruma.com.

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Position(s): Senior Design Build Engineer/ Design Build Engineer  
Company: Murphy Company  
Web Site: www.murphynet.com  
Main Phone: 303-371-6600  
Fax: 303-371-6616  
Address: 3790 Wheeling Street  
Denver, CO 80239

Contact: Kerry Mowlam  
Contact Phone: 720-280-2314  
Contact Email: kmowlam@murphy-den.com

**More Info:**

Founded in 1907, Murphy Company performs construction and engineering work in the industrial, commercial, municipal, and institutional markets. Although routinely an ENR top 25 Specialty Contractor, Murphy continues to be a privately held company.

Murphy Company has established relationships in the Colorado front range high technology and pharmaceutical markets, which leads to many negotiated design - build projects where your technical expertise is a marketplace differentiator, and would be valued by both our customers and the Company.

## **DESIGN BUILD ENGINEER in Denver**

We seek a Design-Build Engineer with experience at HVAC & Plumbing construction document production including calculations, layout, coordinate with other disciplines to include CAD drafting, survey of existing conditions and completion of construction drawings. Candidate must demonstrate themselves as a self starter, flexible and adaptable. College Mechanical Engineering Degree required. EIT required and working towards a PE license a plus. Minimum of 2 years design experience and prior construction experience a plus. Attention to detail is an absolute must and valuing the opinions of field personnel is essential.





# EMPLOYMENT LISTINGS



## **SENIOR DESIGN BUILD ENGINEER in Denver**

We seek a Senior Design-Build Engineer with extensive experience in HVAC & Plumbing construction document production. Candidate will have a minimum of 10 years experience with the design of HVAC and plumbing systems serving institutional and commercial occupancies and must possess a thorough command of basis of design tasks such as load calculations, SD, DD, & CD design packages, equipment sizing, coordination with other design professionals. Candidate must be capable of authoritative verbal and written presentation of proposed solutions. Must be able to drive intensive, and well founded, design efforts with a sense of urgency, and extract needed design information from other design team members - while valuing the opinions of field personnel. Attention to detail is an absolute must. Colorado registration as Professional Engineer is a requirement.

Both positions offers the opportunity to mature your design skills by testing your ideas within a group of experienced estimators, project managers, and shop and field craft people - before the drawings go out. The candidates should be interested in improving their understanding of the construction cost, constructability, and schedule implications of different design choices.

This is an opportunity to join a dynamic, growth-oriented company that offers a highly competitive compensation and excellent benefits package, along with opportunities for personal and professional development. For immediate consideration, please forward your resume to [denverjobs@murphy-den.com](mailto:denverjobs@murphy-den.com). EOE.

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Position(s): We have multiple opportunities.  
Sales/Estimating  
IT/Programming/Graphics  
Install/Commissioning Technicians  
Company: Autocon Incorporated  
Main Phone: 303-286-8680  
Fax: 303-286-1848  
Address: 801 East 64<sup>th</sup> Ave.  
Denver, Co. 80229

Contact: Dean Koenig  
Contact Phone: 303-286-8680  
Contact Email: [controls2006@yahoo.com](mailto:controls2006@yahoo.com)

### More Info:

Autocon is an electrical contractor specializing in Temperature Control and Building Automation systems. We have been providing these services since 1980.  
An excellent benefits package is provided.







# MEMBERSHIP PROMOTION



Welcome to March edition of “The Membership Promotion Page.” Please take a close look at the chapter's roster located at [www.rockymtnashrae.com](http://www.rockymtnashrae.com) for the following:

1. If you are a member of ASHRAE (student, associate, member, etc.) your name should be included within the roster.
2. If you have requested that your contact address be your residential address, I have only included your name and the city and state of your residence.
3. If you have requested that your contact address be your business address, I have included your name, the business name and mailing address, and your email address.
4. If a “0” appears where your email address should be, ASHRAE does not have an email address for you assuming your contact address is your business address.
5. Your name appears in the same format ASHRAE has it recorded. I have not attempted to add “Dr”, “PE”, “PhD” or other pertinent information that ASHRAE does not have.
6. If any of your information is incorrect, or if you want changes made to your information, please send an email to [larry@acemechanical.com](mailto:larry@acemechanical.com) and I will make the requested changes.
7. If you have been omitted from this list and want to know why, please send an email to [larry@acemechanical.com](mailto:larry@acemechanical.com) and I will research why ASHRAE is not including you. Common reasons for omission include human error and unpaid ASHRAE membership dues.





NAME: \_\_\_\_\_  
 (LAST) (FIRST) (MI)

STATUS: RENEWAL\_\_\_\_ NEW MEMBER\_\_\_\_ ADDRESS CHANGE\_\_\_\_

PLEASE CIRCLE PREFERRED MAILING ADDRESS:

HOME ADDRESS & PHONE

BUSINESS NAME, ADDRESS & PHONE

\_\_\_\_\_  
 \_\_\_\_\_

\_\_\_\_\_  
 \_\_\_\_\_

p: \_\_\_\_\_

p: \_\_\_\_\_

Preferred email address: \_\_\_\_\_

Society Membership No.: \_\_\_\_\_

Name Tag (\$10.00) PAID? Y N

Name to appear on name tag as: \_\_\_\_\_

I WOULD LIKE TO BE CONTACTED ABOUT SERVING ON ONE OF THE FOLLOWING COMMITTEES OR FUNCTIONS (PLEASE CIRCLE).

- A. NEWSLETTER
- B. MEMBERSHIP
- C. MEETING ATTENDANCE
- D. EDUCATION
- E. GOLF
- F. CHAPTER HISTORIAN
- G. TECHNICAL SEMINARS

- H. RESEARCH FUND PROMOTIONS
- I. MONTHLY MEETING PROGRAMS
- J. PUBLICITY
- K. SPOUSE'S NIGHT / SOCIAL COMMITTEE
- L. COLORADO ENGINEERING COUNCIL
- M. GENERAL (COMMITTEE HELP)
- N. ENERGY COMMITTEE

PLEASE MAIL THIS INVOICE AND YOUR CHECK FOR \$35.00 + \$10.00 (PAYABLE TO ROCKY MOUNTAIN CHAPTER ASHRAE) TO THE ADDRESS BELOW. SOCIETY WILL INVOICE YOU FOR BOTH SOCIETY AND LOCAL DUES EVERY YEAR FOLLOWING THIS FIRST YEAR:

Larry Hodgins, 13271 Holly St #F, Thornton CO 80241

membership@rockymtnashrae.org



## FIRST CLASS

Chapter may not act for Society. Expressions,  
opinions, and comments within this newsletter should  
not be taken as those of the Chapter or Society.

Rocky Mountain Chapter of ASHRAE  
c/o Justin Dunkin  
CFM Company  
1495 S. Platte River Dr.  
Denver, CO 80223  
303-607-4444



## ACTIVITIES CALENDAR



For membership info or change of address contact: Larry Hodgins • Empire Gas • [lhodgins@empiregas.com](mailto:lhodgins@empiregas.com)

March 1, 2006

**Stratification and Mixing**

April 5, 2006

TBD

May 3, 2006

TBD / Tour

Visit the new Rocky Mountain ASHRAE website:

[www.rockymtnashrae.com](http://www.rockymtnashrae.com)



Volume 47, Number 8

**APRIL 2006**

Editor: Justin Dunkin

Visit the new Rocky Mountain ASHRAE website:  
[www.rockymtnashrae.com](http://www.rockymtnashrae.com)

**Date:** April 5, 2006

**Cost:** Rocky Mtn Chapter Members-\$25\*  
\*With Reservations Made Before Monday Noon

**Dinner Location:** Wynkoop Brewing Company  
1634 18th St.  
Denver, CO 80202  
(Downtown, Corner of 18<sup>th</sup> & Wynkoop)

Guests, Non-members or Without Reservation - \$30  
Students - \$20

**RSVP:** **Jeremy Hollands**  
E-mail: [JDH@catorruma.com](mailto:JDH@catorruma.com)



## APRIL PROGRAM



**ASHRAE Dinner meeting**

**Student Night**

**April 5, 2006**

### **Retro-commissioning to Improve Building Performance**

This month we are pleased to welcome Mr. Don Davenport, P.E. as our speaker. This presentation will focus on the retro-commissioning process as a means to correct problems with building systems and associated energy, maintenance savings that retro-commissioning can provide the building owner. The four key steps in the retro-commissioning process will be discussed and case studies will be presented to reinforce the process and what can be achieved by thoroughly executing retro-commissioning in building systems. This presentation will be a condensed version of full workshops that are presented regularly throughout the US on commissioning and retro-commissioning by EMC Engineers. Particular focus on building HVAC systems will be emphasized.

Don Davenport, BSME, has 30 years experience in building projects including K12, universities, institutional, healthcare, government and industrial clients. As Executive Vice President for EMC Engineers he oversees projects that involve energy engineering, commissioning, retro-commissioning, system design, and turn-key construction. Don serves on several technical committees and presents regularly in such technical subjects as project planning, commissioning, retro-commissioning, benchmarking building performance and energy performance in buildings.

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Brian Lynch  
VP, Programs  
ASHRAE - Rocky Mountain Chapter



# ROCKY MOUNTAIN ROSTER



President .....John Stumpf.....john.stumpf@york.com

President Elect.....Kevin Parrot .....KevinP@trinity-mechanical.com

Vice President.....Brian Lynch .....brian.lynch@york.com

Secretary .....Scott Martin.....smartin@rmhgroup.com

Treasurer .....Jeremy Hollands .....jhollands@catorruma.com

Newsletter Editor .....Justin Dunkin .....justind@cfmcompany.com

Membership .....Larry Hodgins.....lhodgins@empiregas.com

Refrigeration .....Dave Rodenberg.....drodenberg@long.com

Historian.....Steve Maxson .....smaxson@sbengr.com

Technology Transfer .....Ken Urbanek.....kurbanek@mkkeng.com

Resource Promotions .....Kevin Parrot .....KevinP@trinity-mechanical.com

Web Master .....Kyle Manske .....kmanske@comfortsystemsusa.com

Education Chairman .....Kevin Ainsworth .....kainsworth@mcgrath-inc.com

Director .....Mark Jelinske .....mjelinske@catorruma.com

Director .....Kate Allen.....kate3222@msn.com

Past President .....Dave Rodenberg.....drodenberg@long.com





# PRESIDENT'S MESSAGE



Welcome Members,

With only two meetings left this year we still have a lot of things to accomplish before we finish. First I would like all the principles in our industry to take the time to take those calls from our Research committee about this year's ASHRAE Research donation. This is a very important program that normally pays back far more than we could possibly put in. AHSRAE is funding eleven students who will receive a total of \$103,000 through ASHRAE's grants-in-aid program, which is designed to encourage students to continue their education in preparation for service in the HVAC&R industry. The recipients were chosen by the Society's Research Administration Committee at ASHRAE's 2006 Winter Meeting. The grants are awarded to full-time graduate students of ASHRAE-related technologies. ASHRAE is also funding a new design for extreme conditions with undergraduates to better understand energy recovery. This brings me to announce our second Student Night this year with the emphasis being on "Student in Industry Day." This allows those students interested in the HVAC aspect to see different facets of our business to get a better understanding of what occurs in our Industry. Please support our students by either sponsoring or mentoring a student Wednesday the 5<sup>th</sup> of April.

Lee Burgett our National ASHRAE President will be in the area Monday March 10<sup>th</sup> for a breakfast meeting discussing Sustainable building design. Please see the article in the newsletter along with the map for the details. This breakfast meeting will be in Castle Rock at the Pegasus starting at 8:00 A.M. and last approximately an hour. Space is limited for this Joint meeting with the Pikes Peak Chapter so ensure to RSVP with me as soon as possible.

This month we are pleased to welcome Mr. Don Davenport, P.E. as our speaker. This presentation will focus on the retro-commissioning process as a means to correct problems with building systems and associated energy, maintenance savings that retro-commissioning can provide the building owner.

I want to say thank you to Mr. Ross Lindgren as our speaker last month who discussed Stratification and Mixing. Ross did a great job explaining how important proper mixing can enhance the reliability and efficiency of the HVAC system.

Thank you for supporting your Rocky Mountain ASHRAE Chapter and I look forward to seeing everyone next Wednesday at the Wynkoop Brewery in Downtown Denver.

John D. Stumpf

[john.stumpf@york.com](mailto:john.stumpf@york.com)

President, Rocky Mountain Chapter ASHRAE





## A Brief History of the ASHRAE Handbook

The lineage of the Handbook begins in 1922, when the American Society of Heating and Ventilating Engineers (ASH&VE) published its Heating and Ventilating *Guide*. Its purpose was stated as follows in its preface: "The purpose of this new addition to the Society's publications is to provide the engineer, the architect and contractor alike, with a useful and reliable reference data book relating to the art of heating and ventilating." Society Technical Committees, Task Groups, and individuals obtained data and prepared chapters using information from any authoritative source. Society-sponsored research provided much information. ASH&VE, which later became the American Society of Heating and Air-Conditioning Engineers (ASHAE), published *The Guide* until 1961, when it was merged with the American Society of Refrigerating Engineers' (ASRE) *Refrigerating Data Book*, published since 1932, following the merger of the two societies in 1959. The combined publication was called the *ASHRAE Guide and Data Book*. Separate volumes were issued for *Fundamentals* and *Equipment*, and *Applications*. In 1967, the information in the *Guide and Data Book* was regrouped into a *Handbook of Fundamentals*, with separate *Systems*, *Applications*, and *Equipment* volumes. In 1973, the *Guide and Data Book* was renamed the *ASHRAE Handbook*. In 1985, separate I-P and SI unit volumes were issued, and in 1986, a separate Refrigeration volume was established. Although volume groupings have shifted over the years, the name and the essential method by which the *ASHRAE Handbook* is compiled has continued to the present.



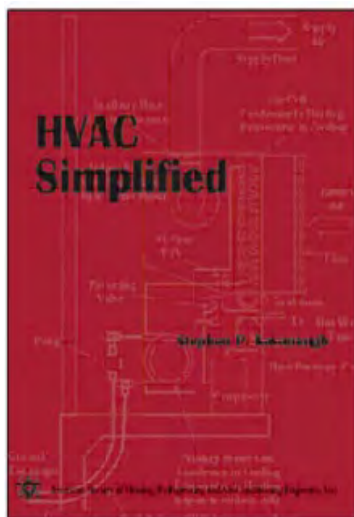


# TECHNOLOGY



## The Latest in Technical, Energy, and Government Activities

### HVAC Simplified in New Book from ASHRAE



ATLANTA Step-by-step engineering design methods and tools are emphasized in a new design manual from ASHRAE. “*HVAC Simplified* provides an understanding of fundamental HVAC concepts and explains simple design tools used to create building systems that are efficient and provide comfortable and healthy environments,” said author Stephen Kavanaugh, Ph.D., a professor of mechanical engineering at the University of Alabama.

Topics include equipment selection and specification, comfort and indoor air quality, ventilation air, ASHRAE standards, building assemblies, heating and cooling loads, electrical and control systems, and design of air and water distribution systems.

The book includes a CD with spreadsheet programs that incorporate design and computation procedures. For more information on the new *HVAC Simplified*

publication and other great ASHRAE references check out the ASHRAE Bookstore Website at [www.ashrae.org](http://www.ashrae.org) and then click on the link to the Bookstore.

### ASHRAE Technology Awards Many Rocky Mountain Chapter Awards Available

Each year the Society reviews applications for Technology Awards in seven categories: Commercial Buildings; Institutional Buildings; Health Care Facilities; Industrial Facilities or Processes; Public Assembly; Residential and Alternative or Renewable Energy Use. All categories carry awards for both new and existing buildings in first, second and third place. Many awards are available, including multiple Rocky Mountain Chapter awards, and the Society encourages ASHRAE members to submit any project they have been involved in which demonstrates technological achievements. These awards recognize ASHRAE members who design innovative systems, and communicate the designs to other members as well as building and facility owners.

To apply for an award, fill out the Chapter Technology Award Application (Short Form), available at the monthly meeting or contact CTTC Chair Ken Urbanek at [kurbanek@mkkeng.com](mailto:kurbanek@mkkeng.com) for an application. The awards focus on five criteria: Energy Efficiency; Indoor Air Quality; Innovation; Operation and Maintenance; Cost Effectiveness and Environmental Impact. Not all scoring topics must apply to the project to be considered for an award. Winners in each category will receive a local award and then they will be submitted to the Regional CTTC Vice Chair and can be considered for International awards, or the Engineering Award of Excellence. All applications are due by April 19th, 2006 and local recipients of the Technology Award will be announced at the final Chapter meeting in May.

### Free ASHRAE Satellite Broadcast “Sustainability and the Building Environment”

Information regarding building sustainability principles, practices, and emerging concepts will be presented in this FREE program sponsored by ASHRAE's Chapter Technology Transfer Committee see our insert in this month's newsletter.

If you have any questions regarding Technical, Energy, and Government Activities with respect to ASHRAE please contact local Chapter Technology Transfer Committee Chair Ken Urbanek via e-mail at [kurbanek@mkkeng.com](mailto:kurbanek@mkkeng.com).





# TECHNOLOGY



## Free ASHRAE Satellite Broadcast/Webcast "Sustainability and the Building Environment"

**April 19, 2006 11:00 A.M. 2:00 P.M. MDT**

Information regarding building sustainability principles, practices, and emerging concepts will be presented in this **FREE** program sponsored by ASHRAE's Chapter Technology Transfer Committee. Visit <http://www.ashrae.org/greenbuildingsbroadcast> for complete details.

### How to Participate

You may host a Satellite Broadcast/Webcast for your colleagues, you may register to view the Satellite Broadcast/Webcast at a local site (see below), or you may register to view the Webcast on you PC.

### Local Broadcast/Webcast Sites Hosted By Local ASHRAE Sponsor's

- I **North Denver Metro Area Empire Gas & Electric Equipment Co** 4900 Osage St., Suite 100, Denver, CO
- II **Central Denver Metro Area (Tentatively) TRANE** 445 Bryant Street Unit 5, Denver, CO
- III **South Denver Metro Area MKK Consulting Engineers, Inc.** 7600 East Orchard Rd. Suite 250S, Greenwood Village, CO

As seating is limited please RSVP to Ken Urbanek at [kurbanek@mkkeng.com](mailto:kurbanek@mkkeng.com) by April 10, 2006 with your preferred viewing site. Participants of Local Broadcast Sites are also encouraged to register online.

### Tentative Broadcast Topics

- I. "Sustainability: What Does It Mean and Why Is It important?"  
Hal Levin, Fellow ASHRAE, Research Architect, Building Ecology Research Group, Santa Cruz, California
- II. "If it's Not Energy Efficient, It's not Sustainable: How to Ensure Top Energy Performance in Green Buildings"  
Jean Lupinacci, Director, ENERGY STAR® Commercial and Industrial Branch, Climate Protection Partnerships Division, U.S. Environmental Protection Agency
- III. "Integrated Design for Sustainability"  
Malcolm Lewis, Ph.D., P.E., President, CTG Energetics, Irvine, California
- IV. "Better by Design Project Studies"  
Kevin Hydes, P.E., P. Eng., Vice President, Sustainable Practice, Stantec, Montreal, Canada
- V. "Green Buildings and Sustainable Communities A Developer's Perspective"  
Joe Van Belleghem, Partner, Windmill Developments, Victoria, Canada

### New National ASHRAE Membership Discount

Non-member participants will be given a \$50 discount for applying for national ASHRAE membership. A special membership application will be available at satellite broadcast sites or by request at 678-539-1139.

### Registration

Online registration for Satellite Broadcast Site Coordinators and Webcast Participants will begin March 1, 2006, at <http://www.ashrae.org/greenbuildingsbroadcast>. There is no fee for registration. If you have any questions contact local Chapter Technology Transfer Committee Chair Ken Urbanek via e-mail at [kurbanek@mkkeng.com](mailto:kurbanek@mkkeng.com) or call at 303-796-6000.





# ANNOUNCEMENTS



## The Rocky Mountain Chapter of ASHRAE Presents...

### “Research 2 Reality” The 14th Annual Technical Conference & Vendor Expo

**Friday, May 12, 2006**  
Sheraton Denver West Hotel  
360 Union Blvd. in Lakewood

Featuring:

- Keynote Presentation by Mr. Jim Fields, Director at Large ASHRAE Society Board of Directors
- Four Additional Seminar Tracks featuring presentations on: *Psychrometrics, Air Cooled vs. Water cooled chillers, Pump and Piping design, Basic Steam System Design, Fan Systems and Selections, Modular VAV Systems Design and Application, Stratification and Designing Mixing Systems, Cooling Tower Applications, Dealing with Dampers Design and Code Issues, Kitchen Exhaust Systems Design, Dehumidification Methods with Energy Saving Technology, Introduction to BAS Technology, BAS Design and Criteria, Recommissioning and Building Automation, Advanced Control Strategies, Specifying Interoperable BAS, LEED in Colorado, Energy and Environment*
- Half-day and full-day passes available.
- PDH Credits available (slight additional cost for certificate)

Who should attend?

Architects, Engineers, Sales, Contractors, Building Owners, Operators, and Students

Denver Location: Sheraton Denver West Hotel  
**360 Union Blvd, Lakewood, CO 80228**

Time: 7:30 AM to 4:30 PM

Cost: \$110.00 full day, \$60.00 half day (lunch not included) if received by May 5, 2006  
\$125.00 full day, \$65.00 half day (lunch not included) if received May 6, 2006 or later

Individual or company registrations available. Company passes may be shared.

10% Discount available for five or more passes for one company

Net proceeds to benefit **ASHRAE Scholarship and Research**

For additional information, contact: Brian Lynch at [brian.lynch@york.com](mailto:brian.lynch@york.com)

Program, Seminars, and Speakers subject to change





# REGISTRATION



## REGISTRATION FORM

14th Annual Technical Conference

Friday, May 12, 2006

Sheraton Hotel Denver West 360 Union Boulevard, Lakewood CO 80228

### "Research 2 Reality"

Presented by:

**The ASHRAE Rocky Mountain Chapter**

*Register by May 5, 2006 to ensure space availability.*

*Checks received after May 6th (or walk-ins the day of the seminar) will be accommodated pending space availability.*

Please photocopy this form for additional attendees and for your records.

#### Individual Registration:

Your Name \_\_\_\_\_ Title \_\_\_\_\_

Company \_\_\_\_\_

Mailing Address \_\_\_\_\_

Phone \_\_\_\_\_ Fax \_\_\_\_\_

#### Company Registration:

Company \_\_\_\_\_

Mailing Address \_\_\_\_\_

Phone \_\_\_\_\_ Fax \_\_\_\_\_

#### Seminar Preference: (This is for space allocation only. You may attend any seminar during the conference.)

Check Your First and Second Preference

**HVACR Fundamentals, Basics**

**HVACR Fundamentals, Advanced Topics**

**Energy and Environment**

**Building Automation**

**Please register me for...**

**Please register my company for... \_\_\_\_\_ passes.**

Check Your Preference

Full day @ \$110.00, (Lunch included), (Total Number) \_\_\_\_\_

1/2 day at \$60.00, (Lunch is not included), (Total Number) \_\_\_\_\_

Morning Session

Afternoon Session

**Late Registration, received after after May 5, 2006, will be:**

**\$125.00, (includes lunch), \$65.00 1/2 day, (no lunch)**

10% Discount for 5 or more Company Passes

**Enclosed please find a check for: \$ \_\_\_\_\_ Mastercard/Visa total: \$ \_\_\_\_\_**

Please Make Checks payable to Rocky Mountain Chapter ASHRAE

MC# \_\_\_\_\_ Cardholder Name \_\_\_\_\_ Exp Date: \_\_\_\_\_

VISA# \_\_\_\_\_ Cardholder Name \_\_\_\_\_ Exp Date: \_\_\_\_\_

Please mail check and registration form to:

**Chris Huff - York**

**5855 Stapleton Drive North, Unit A-155**

**Denver, CO 80216**

**Phone: 720-889-1500 Fax: 720-889-1519**

**e-mail: [chris.huff@york.com](mailto:chris.huff@york.com)**

**For questions please contact: Brian Lynch, York International, [brian.lynch@york.com](mailto:brian.lynch@york.com) or fax: 720-889-1519**

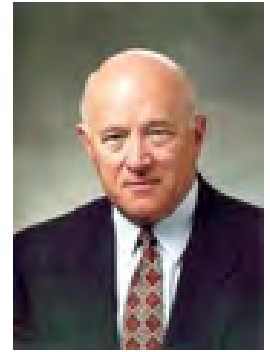




# ANNOUNCEMENTS



## FREE BREAKFAST WITH THE 2005-06 ASHRAE PRESIDENT 8 AM on April 10<sup>th</sup>



**Pegasus on the Square Family Restaurant  
313 Jerry Street, Castle Rock**

**Lee Burgett, P.E., Fellow ASHRAE**, serves as consultant to Trane, a business of American Standard Companies, and others, following his retirement from Trane as vice president-new ventures. He resides in La Crosse, Wisconsin.

As ASHRAE's president, Mr. Burgett directs the Society's Board of Directors and oversees the Executive Committee. During his term, he is focusing on ASHRAE technology including standards development, support of HVAC&R research, and technical activities aimed at disseminating information and educating its membership. Mr. Burgett served on the Board of Directors as president-elect, treasurer, vice president and director-at-large. He was chair of the Finance Committee, Members Council, the Board Policy Committee for Standards, the Standards Committee, the presidential ad hoc committee on health impacts in standards, Technology Council and Publishing and Education Council. He is an ASHRAE Distinguished Service Award recipient.

He also is active in a number of related industry organizations, including the U.S. Green Building Council, the Canadian Standards Association, Underwriters Laboratories Inc., the Air-Conditioning and Refrigeration Institute and the American Society of Mechanical Engineers. Mr. Burgett received his bachelor of science in 1961 and his master of science in mechanical engineering in 1962 from Michigan State University and his master's in business administration from the University of Wisconsin in 1972.

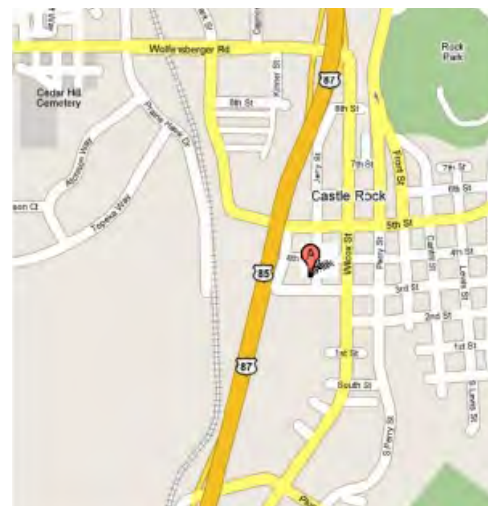
### SPONSORED BY:

**Rocky Mountain Trane** is the One Source Solutions Provider for all your HVAC needs throughout Colorado and Utah, and parts of Wyoming, Nebraska and Idaho.

### Contact:

John D. Stumpf  
[john.stumpf@york.com](mailto:john.stumpf@york.com)  
President, Rocky Mountain Chapter ASHRAE

Ken Merola  
[President@pikespeakashrae.net](mailto:President@pikespeakashrae.net)  
President, Pikes Peak Chapter ASHRAE





# ANNOUNCEMENTS



## **The Rocky Mountain Chapter will be hosting the Regional ASHRAE Conference for 4 days in August of 2008.**

This conference is where chapters in our Region IX get together to discuss chapter business operations.

The chapter will be forming committees and needs volunteers for:

Finance

Events

Entertainment

Publicity

Reception and Registration

Transportation

Golf

Technical Sessions and more.

If you are interested in helping out please contact Scott Martin  
by email [smartin@rmhgroup.com](mailto:smartin@rmhgroup.com) or phone 303-239-0909.





# EMPLOYMENT LISTINGS



## APRIL LISTINGS

Position: Design Engineer  
Company: Integrated Mechanical, LLC  
Main Phone: 970-556-0570  
Fax: Toll free 800-656-4359  
Address: 2601 S. Lemay #7-421  
Fort Collins, CO 80525  
Contact: Thomas Segelhorst  
Contact Phone: 970-556-0570  
Contact Email: [integrated-mech@comcast.net](mailto:integrated-mech@comcast.net)

### More Info:

Qualified candidates shall have a BS Degree in Mechanical Engineering with a minimum 3 years of experience in HVAC/Plumbing design. Work history MUST include design of HVAC and plumbing systems for commercial buildings. Residential design experience may also be helpful. Working knowledge of AutoCAD is necessary. This position will include project management, engineering design, supervising system installation, and assisting other engineers in job completion. Integrated Mechanical is a privately-owned design firm that strives for the highest quality service possible. We offer a stable working environment for our employees.

---

Position(s): Preconstruction Manager / Preconstruction Project Engineer  
Company: U.S. Engineering Company  
Web Site: [www.usengineering.com](http://www.usengineering.com)  
Main Phone: 303-964-8060  
Fax: 303-964-8063  
Address: 729 S.E. 8<sup>th</sup> St  
Loveland, CO 80210

Contact: Dan Strait  
Contact Phone: 303-964-8060  
Contact Email: [dstrait@usengineering.com](mailto:dstrait@usengineering.com)







# EMPLOYMENT LISTINGS



More Info:

## **Preconstruction Manager**

U.S. Engineering Company is seeking to hire a preconstruction manager for a permanent position in the Colorado Region. U.S. Engineering Company is one of Colorado's leading mechanical contractors providing high quality piping, plumbing, and sheetmetal services. Desired candidates shall have previous experience in preconstruction services or a minimum of 4 years experience in the design of HVAC and plumbing systems. P.E. preferred but not required. Position includes but not limited to: budget management, conceptual & schematic level systems design of plumbing, piping, & HVAC systems; conceptual estimating and value engineering; proposal preparation and presentation. Candidate must have good communication skills. Salary & benefits competitive. If interested, please contact Dan Strait 303-964-8060. U.S. Engineering Company is an equal opportunity employer. Visit our website at [www.usengineering.com](http://www.usengineering.com)

## **Preconstruction Project Engineer**

U.S. Engineering Company is seeking to hire a preconstruction project engineer for a permanent position in the Colorado Region. U.S. Engineering Company is one of Colorado's leading mechanical contractors providing high quality piping, plumbing, and sheetmetal services. Degree in mechanical engineering or architectural engineering required. Entry level up to 2 years experience in mechanical consulting engineering preferred. Position includes but not limited to: Conceptual & schematic level systems design of plumbing, piping, & HVAC systems. Additionally, position includes conceptual estimating, value engineering & proposal preparation. Candidate must have good communication skills. Salary & benefits competitive. If interested, please contact Dan Strait 303-964-8060. U.S. Engineering Company is an equal opportunity employer. Visit our website at [www.usengineering.com](http://www.usengineering.com)





# EMPLOYMENT LISTINGS



Position: HVAC Project Engineer  
Company: The Ballard Group, Inc.  
Web Site: [www.theballardgroup.com](http://www.theballardgroup.com)  
Main Phone: 303 988 4514  
Fax: 303 988 4517  
Address: 2525 S. Wadsworth Blvd.  
Suite 200  
Lakewood, CO 80227

Contact: Steve Franz  
Contact Phone: 303 988 4514  
Contact Email: [sfranz@theballardgroup.com](mailto:sfranz@theballardgroup.com)

## More Info:

The ideal candidate will have a minimum of 4 years HVAC design experience and enjoys working on a wide variety of project types. The Ballard Group is an HVAC design firm with 20 employees. We have been in business since 1978 and work primarily on healthcare, education and fitness center projects.

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Company: EMC Engineers, Inc.  
Web Site: [www.emcengineers.com](http://www.emcengineers.com)  
Main Phone: 303-974-1200  
Fax: 303-974-1239  
Address: 143 Union Blvd, Suite 350  
Lakewood, CO 80228  
Contact: Don Davenport  
Contact Phone: 303-974-1219  
Contact Email: [ddavenport@emcengineers.com](mailto:ddavenport@emcengineers.com) (for all positions below)

Company Background - EMC Engineers has specialized in improving building operations and energy efficient building design and performance for 30 years. We provide commissioning, retro-commissioning, energy analysis/modeling, sustainable design and turn-key design/build services for a full range of clients including government, commercial, utility, institutional, K-12, and industrial. Our services focus on HVAC and control systems, electrical lighting, lighting, daylighting, and other mechanical systems such as geo-exchange, evaporative cooling and other low energy concepts. Substantial revenue growth in our core business areas has resulted in multiple position opportunities in our commissioning, energy, sustainable design, and design/build teams. EMC provides our services for clients throughout the US, so ability to travel periodically will be required. EMC currently has 5 offices nationwide. Positions are available in our Colorado office and in our Southern California office.





# EMPLOYMENT LISTINGS



## **Position(s): Junior and Staff Commissioning Engineers (Colorado and California)**

EMC needs motivated Junior and Staff engineers to join our commissioning team. Junior engineers should possess 0 to 2 years of experience and Staff Engineers should possess 4 to 8 years of experience, with B.S. in Architectural or Mechanical Engineering (non-degreed persons may be considered given an equivalent amount of field experience in HVAC and controls systems). Candidates must possess strong communication skills, strong analytical capability, good contractor relationship skills, "hands on" operations interest, including experience with energy simulation modeling and system testing. Technical interest in HVAC and control systems troubleshooting, assessment, testing, programming, and commissioning are expected. Experience or strong interest in high performance buildings, sustainable design, LEED projects, and building envelope or electrical systems would be considered a "plus." Junior engineer positions in EMC also provide exposure to energy modeling and sustainable design project tasks, so a desire to execute differing kinds of engineering work will be required.

## **Position(s): Junior and Staff Energy Engineers (Colorado)**

EMC needs motivated Junior and Staff engineers to join our energy team. Junior engineers should possess 0 to 4 years of experience and Staff Engineers should possess 4 to 8 years of experience, with B.S. or M.S. in Architectural or Mechanical Engineering, and either a P.E. or working toward P.E. for Staff level candidates. Candidates must be conscientious, with strong analytical capability (thermodynamics, heat transfer, daylighting) including experience with energy simulation modeling and HVAC system troubleshooting and assessment. Experience or strong interest in high performance buildings, sustainable design, LEED projects, and building envelope or electrical systems would be considered a "plus." Junior positions will also provide exposure to design and commissioning projects periodically, so a desire to execute differing assignments will be required.

## **Position(s): Junior and Staff Mechanical Design Engineers (Colorado)**

We are looking for motivated Junior and Staff level mechanical design engineers to join our mechanical design team. Successful Junior candidates should possess 0 to 4 years of experience, successful Staff level candidates should possess 4 to 8 years of experience. A B.S. in Mechanical or Architectural Engineering, and either a P.E. or working toward P.E. for Staff level candidates. Candidates must possess strong analytical skills, good team skills, and thorough technical understanding of mechanical system analysis, design, and specifications. Technical focus for this position will be work in HVAC, plumbing and control systems. Experience with high performance buildings, sustainable design, and LEED projects, while not mandatory, would be considered a "plus." Junior positions will also provide exposure to energy modeling, sustainable design, and commissioning project tasks, so a desire to execute differing kinds of engineering work will be required.





# EMPLOYMENT LISTINGS



## **Position(s): Staff Electrical Engineer (Colorado)**

We are looking for an electrical engineer to join our team. Successful Staff level candidates should possess 4 to 8 years of experience. A B.S. or M.S. in Electrical Engineering, and either a P.E. or working toward P.E. Candidates must possess strong analytical skills, good team skills, and thorough technical understanding of electrical system analysis, design, and specifications. Technical focus for this position will be work in lighting, daylighting, and power distribution in buildings. Experience with high performance buildings, sustainable design, and LEED projects, would be considered a "plus." This position will also support assigned tasks in our energy and commissioning teams, so ability to be flexible in work assignments is required.

## **Position(s): Design/Build Project Manager (Colorado)**

We are looking for strong project manager to join our design/build services unit. Successful candidates should possess a minimum of 10 years of full spectrum project management experience (energy assessments, design, construction oversight, and commissioning) with a B.S. in Architectural or Mechanical Engineering or Construction Engineering or for a non-degreed person, an equivalent amount of experience. P.E. or working toward a P.E. is a plus. Candidates must possess strong communication skills, outstanding client relationship building skills, full understanding of the complete design/build delivery process for energy improvement projects, good contractor relationship skills, "hands on" operations interest, and ability to be flexible with multiple project work assignments, including understanding energy modeling, design, and system testing. Technical excellence in HVAC and control systems troubleshooting, assessment, testing, programming, and commissioning are expected. Experience with high performance buildings, sustainable design, LEED projects, and building envelope or electrical systems, and energy savings performance contracting would be considered a "plus."

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Position(s): 1 EE, 3 MEs  
Company: The RMH Group, Inc.  
Web Site: [www.rmhgroup.com](http://www.rmhgroup.com)  
Main Phone: 303 239 0909  
Fax: 303 312 4609  
Address: 12600 W Colfax Ave Suite A400  
Lakewood CO 80215

Contact: Jill Patterson (HR Manager)  
Contact Phone: 303 239 2761  
Contact Email: [jpatterson@rmhgroup.com](mailto:jpatterson@rmhgroup.com)

### **More Info:**

The RMH Group, a high-quality consulting engineering company, is looking for several above-average engineering candidates. RMH has been around for over 40 years serving national and international clients. In





# EMPLOYMENT LISTINGS



addition, we are one of the leading engineering companies for sustainable design. We currently have two divisions, commercial/institutional and industrial. If you like to learn, grow, and share your knowledge with a great team, this is the place for you!

We offer a competitive compensation package including flex schedule, medical, dental, vision, 401(k), recruitment bonuses, tuition assistance, generous paid time off including paid holidays and vacation/sick time, disability, life, supplemental life, flex plan, financial planning assistance, credit union membership, and a solid chance to advance yourself and your career. RMH is an EEO/AA, M/F/D/V employer.

## **Electrical Engineer**

We're looking for an electrical engineer with a BSEE and 2-5 years of hands-on design experience (preferably in AutoCAD) for our Industrial Process Division. Power/lighting/controls experience is very helpful. Good people skills are a definite plus. Please reference EEIPD106A.

## **Mechanical Engineers**

If you're a mechanical engineer with a BSME, 3-5 years of hands-on HVAC design experience and AutoCAD, we may have a place for you in our Building Systems Division. Experience with commercial and institutional projects (non-industrial) is needed, such as office buildings, schools, etc. Sustainable design experience is especially helpful. Experience with plumbing and fire protection is a plus and people skills are important. Please reference MEBSD106A.

We also need a mechanical engineer with a BSME and 1-2 years of HVAC hands-on design experience in AutoCAD for our Industrial Process Division. Please reference MEIPD106A.

Are you a driven mechanical engineer with 10-15 years of HVAC design and project management experience with projects such as laboratories/healthcare (particularly) and other institutional buildings? If so, we'd love to talk to you! A PE is required. Experience with plumbing and fire protection is a plus. Good client/owner interface and marketing skills are a must for this senior position which can lead to a principal/ownership role in the company. Please reference MEHC106A.

---

Position: Mechanical Engineer  
Company: PCD Engineering Services, Inc.  
Web Site: [www.pcdengineering.com](http://www.pcdengineering.com)  
Main Phone: 303-678-1108  
Fax: 303-678-1142  
Address: 184 Wetterhorn Way Longmont CO 80501

Contact: Peter D'Antonio  
Contact Phone: 303-678-1108





# EMPLOYMENT LISTINGS



Contact Email: [peter@pcdengineering.com](mailto:peter@pcdengineering.com)

More Info:

**PCD Engineering Services, Inc.** is a firm focused on the client and the environment offering sustainable mechanical/electrical design engineering, energy management, and integrated building system solutions.

Interested in working in a growing engineering firm? Interested in being a part of challenging, innovative projects? We are seeking talented individuals ready to contribute to a dynamic and fun working environment.

## Mechanical Engineer

Successful candidate will have 4+ years experience in the design of HVAC and plumbing systems. Candidate will be working on a wide variety of project types including new construction and facility renovations. Experience in energy efficient design and analysis a plus. Please submit resume and salary history to [peter@pcdengineering.com](mailto:peter@pcdengineering.com).

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Position(s): Mechanical Engineer/Designer  
Company: Cator, Ruma & Associates  
Web Site: [cra@catorruma.com](mailto:cra@catorruma.com)  
Main Phone: 303-232-6200  
Fax: 303-233-3701  
Address: 1550 Dover St., Suite 2  
Lakewood, CO 80215

Contact: Bruce Appel  
Contact Phone: 303-232-6200  
Contact Email: [cra@catorruma.com](mailto:cra@catorruma.com)

More Info:

If you are interested in working on technically challenging HVAC, plumbing and fire-protection design projects, we are interested in discussing career opportunities with you. We are hiring mechanical engineers and senior level designers with a minimum of 4 years experience in mechanical building systems design. We offer an excellent benefit package (salary, medical, 401K) with Friday afternoons off. Fax resumes to 303-233-3701 or email to [cra@catorruma.com](mailto:cra@catorruma.com).





# MEMBERSHIP PROMOTION



Welcome to March edition of “The Membership Promotion Page.” Please take a close look at the chapter's roster located at [www.rockymtnashrae.com](http://www.rockymtnashrae.com) for the following:

1. If you are a member of ASHRAE (student, associate, member, etc.) your name should be included within the roster.
2. If you have requested that your contact address be your residential address, I have only included your name and the city and state of your residence.
3. If you have requested that your contact address be your business address, I have included your name, the business name and mailing address, and your email address.
4. If a “0” appears where your email address should be, ASHRAE does not have an email address for you assuming your contact address is your business address.
5. Your name appears in the same format ASHRAE has it recorded. I have not attempted to add “Dr”, “PE”, “PhD” or other pertinent information that ASHRAE does not have.
6. If any of your information is incorrect, or if you want changes made to your information, please send an email to [larry@acemechanical.com](mailto:larry@acemechanical.com) and I will make the requested changes.
7. If you have been omitted from this list and want to know why, please send an email to [larry@acemechanical.com](mailto:larry@acemechanical.com) and I will research why ASHRAE is not including you. Common reasons for omission include human error and unpaid ASHRAE membership dues.







NAME: \_\_\_\_\_  
 (LAST) (FIRST) (MI)

STATUS: RENEWAL\_\_\_\_ NEW MEMBER\_\_\_\_ ADDRESS CHANGE\_\_\_\_

PLEASE CIRCLE PREFERRED MAILING ADDRESS:

HOME ADDRESS & PHONE

BUSINESS NAME, ADDRESS & PHONE

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

p: \_\_\_\_\_

p: \_\_\_\_\_

Preferred email address: \_\_\_\_\_

Society Membership No.: \_\_\_\_\_

Name Tag (\$10.00) PAID? Y N

Name to appear on name tag as: \_\_\_\_\_

I WOULD LIKE TO BE CONTACTED ABOUT SERVING ON ONE OF THE FOLLOWING COMMITTEES OR FUNCTIONS (PLEASE CIRCLE).

A. NEWSLETTER

H. RESEARCH FUND PROMOTIONS

B. MEMBERSHIP

I. MONTHLY MEETING PROGRAMS

C. MEETING ATTENDANCE

J. PUBLICITY

D. EDUCATION

K. SPOUSE'S NIGHT / SOCIAL COMMITTEE

E. GOLF

L. COLORADO ENGINEERING COUNCIL

F. CHAPTER HISTORIAN

M. GENERAL (COMMITTEE HELP)

G. TECHNICAL SEMINARS

N. ENERGY COMMITTEE

PLEASE MAIL THIS INVOICE AND YOUR CHECK FOR \$35.00 + \$10.00 (PAYABLE TO ROCKY MOUNTAIN CHAPTER ASHRAE) TO THE ADDRESS BELOW. SOCIETY WILL INVOICE YOU FOR BOTH SOCIETY AND LOCAL DUES EVERY YEAR FOLLOWING THIS FIRST YEAR:

Larry Hodgins, 13271 Holly St #F, Thornton CO 80241

membership@rockymtnashrae.org



## FIRST CLASS

Chapter may not act for Society. Expressions,  
opinions, and comments within this newsletter should  
not be taken as those of the Chapter or Society.

Rocky Mountain Chapter of ASHRAE  
c/o Justin Dunkin  
CFM Company  
1495 S. Platte River Dr.  
Denver, CO 80223  
303-607-4444



## ACTIVITIES CALENDAR



For membership info or change of address contact: Larry Hodgins • Empire Gas • [lhodgins@empiregas.com](mailto:lhodgins@empiregas.com)

|                |                                              |
|----------------|----------------------------------------------|
| April 5, 2006  | Retro-Commissioning                          |
| April 10, 2006 | Free Breakfast with ASHRAE President         |
| April 19, 2006 | Sustainability Webcast See Announcement      |
| May 3, 2006    | TBD / Tour                                   |
| May 12, 2006   | ASHRAE Technical Conference<br>& Vendor Expo |

Visit the new Rocky Mountain ASHRAE website:

[www.rockymtnashrae.com](http://www.rockymtnashrae.com)



Volume 47, Number 9

**MAY 2006**

Editor: Justin Dunkin

Visit the new Rocky Mountain ASHRAE website:  
[www.rockymtnashrae.com](http://www.rockymtnashrae.com)

**Date:** May 3, 2006

**Cost:** Rocky Mtn Chapter Members-\$25\*  
\*With Reservations Made Before Monday Noon

**Dinner** Wynkoop Brewing Company

Guests, Non-members or Without Reservation - \$30

**Location:** 1634 18th St.  
Denver, CO 80202  
(Downtown, Corner of 18<sup>th</sup> & Wynkoop)

Students - \$20

**RSVP: Jeremy Hollands**  
E-mail: [JDH@catorruma.com](mailto:JDH@catorruma.com)

**Time:** 5:30 Social Hour (Wynkoop)  
6:30 Dinner (Wynkoop)  
7:00 Program Begins (Wynkoop)



## MAY PROGRAM



### Energy Recovery

This month we are pleased to welcome Gary Hensley as our speaker. As energy prices keep rising, and the quantity of natural resources diminishes, the need for energy recovery is becoming more prominent in our industry. Also, IAQ is a definite factor for most buildings. This presentation will discuss heat pipes, air-to-air cross flow heat exchangers and enthalpy wheels applied for energy recovery. Recent changes to ASHRAE 90.1 will also be presented as well the IMC-2003, International Mechanical Code, chapter 4, ventilation.

Gary Hensley graduated from University of Illinois, 1996, BSME. He is the Sales Manager for Heat Pipe Technologies, Melbourne, Florida. Gary is a frequent speaker at ASHRAE, AEE chapter meetings in the USA.

See you at the Wynkoop!

Brian Lynch  
VP, Programs  
Rocky Mountain Chapter of ASHRAE



# ROCKY MOUNTAIN ROSTER



President .....John Stumpf .....john.stumpf@york.com

President Elect .....Kevin Parrot .....KevinP@trinity-mechanical.com

Vice President .....Brian Lynch .....brian.lynch@york.com

Secretary.....Scott Martin .....smartin@rmhgroup.com

Treasurer.....Jeremy Hollands .....jhollands@catorruma.com

Newsletter Editor .....Justin Dunkin .....justind@cfmcompany.com

Membership .....Larry Hodgins .....larry@acemechanical.com

Refrigeration .....Dave Rodenberg .....drodenberg@long.com

Historian.....Steve Maxson .....smaxson@sbengr.com

Technology Transfer.....Ken Urbanek .....kurbanek@mkkeng.com

Resource Promotions.....Kevin Parrot .....KevinP@trinity-mechanical.com

Web Master.....Kyle Manske .....kmanske@comfortsystemsusa.com

Education Chairman.....Kevin Ainsworth .....kainsworth@mcgrath-inc.com

Director .....Mark Jelinske .....mjelinske@catorruma.com

Director .....Kate Allen .....kate3222@msn.com

Past President.....Dave Rodenberg .....drodenberg@long.com





# PRESIDENT'S MESSAGE



**Rocky Mountain ASHRAE Members,**

**Thanks to those that attended April's meeting on retro-commissioning. Don Davenport brought up some excellent points to maximize your system to gain building efficiency and ultimately sustainability. With that in mind the joint meeting with Lee Burgett and the Pikes Peak Chapter April 10<sup>th</sup> was a success. Mr. Burgett discussed where ASHRAE is going and what direction we are heading in the future. Take a look at this link to review ASHRAE's strategic plan.  
(<http://www.ashrae.org/template/AssetDetail/assetid/50843>)**

**I want to say thank you to those that participated in our student in industry day to show the local students a little of what we do on a daily basis. If your Company is looking for interns or full time help this summer, consider one of the ASHRAE students from the local universities. Contact Kevin Ainsworth (KAinsworth@mcgrath-inc.com) to receive a copy of their resume.**

**This month we are pleased to welcome Gary Hensley as our speaker. This presentation will discuss heat pipes, air-to-air cross flow heat exchangers and enthalpy wheels applied for energy recovery. Recent changes to ASHRAE 90.1 will also be presented as well the IMC-2003, International Mechanical Code, chapter 4, ventilation.**

**We plan on spending the last two months of the ASHRAE year focusing on our Resource Promotion Campaign, the Technical Conference Friday May 12<sup>th</sup>, and the Golf Tournament on Monday June 26<sup>th</sup> at Hiwan Golf Club.**

**Finally, as the last meeting of the year as chapter president I would like to say I had a great time with all those that I have met on the local level as well as the national level. And I hope that those possibly considering getting involved at the local chapter level, please do so. I especially want to thank the board of governors for all their hard work and dedication; everyone has put in a lot of effort to maintain the high standards set by those before us.**

**John D. Stumpf  
john.stumpf@york.com  
President, Rocky Mountain Chapter ASHRAE**







## The Latest in Technical, Energy, and Government Activities

### Changes to ASHRAE Standard 62.1 Ventilation Rates Proposed



ATLANTA Ventilation requirements for high-rise residential buildings are among changes being proposed for ASHRAE's indoor air quality standard.

Three proposed addenda to ANSI/ASHRAE Standard 62.1-2004, *Ventilation for Acceptable Indoor Air Quality*, are available for comment until May 1. To obtain drafts of or comment on proposed addenda e, f and h, visit [www.ashrae.org/standards](http://www.ashrae.org/standards).

Addendum 62.1h would add requirements for high-rise residential buildings to the standard's ventilation rate table.

Addendum 62.1e would add an informative appendix that summarizes the requirements for documentation found throughout the standard.

Addendum 62.1f would change the purpose and scope of the standard to make them more consistent with its body. The purpose retains its dual goals of providing indoor air quality acceptable to human occupants that minimizes the potential for adverse health effects.

### Use of ASHRAE Standard 62.1 in IMC Would Provide Lower Costs

ATLANTA Use of ASHRAE's new ventilation rate procedure in the International Mechanical Code (IMC) would reduce first costs and energy costs.

ASHRAE has proposed that the ventilation rate calculation procedures from ANSI/ASHRAE Standard 62.1-2004, *Ventilation for Acceptable Indoor Air Quality*, be adopted into the IMC published by the International Code Council. The code establishes minimum regulations for mechanical systems using prescriptive and performance-related provisions.

The current ventilation criteria in the IMC are based on ASHRAE Standard 62-1989. Through research, information on indoor air quality and ventilation has evolved. In response, ASHRAE has enhanced its standard to include the new rate procedure. This code change would make the IMC consistent with the standard and the *2006 Uniform Mechanical Code*.

For more information on ASHRAE Standard 62.1-2004 and other great ASHRAE references check out the ASHRAE Bookstore Website at [www.ashrae.org](http://www.ashrae.org) and then click on the link to the Bookstore.

ASHRAE Satellite Broadcasts Confirmed for the Fall of 06' and the Spring 07'

Tuesday, November 14, 2006 has been confirmed for the "Multiple Benefit Solutions for Enhanced Building Security" Satellite Broadcast/Webcast. ASHRAE Presidential Ad Hoc Homeland Security Committee sponsors this free program.

Thursday, April 19, 2007, has been confirmed for the Chapter Technology Transfer Committee free Satellite Broadcast/Webcast. This free program will focus on "Indoor Air Quality."

If you have any questions regarding Technical, Energy, and Government Activities with respect to ASHRAE please contact local Chapter Technology Transfer Committee Chair Ken Urbanek via e-mail at [kurbanek@mkkeng.com](mailto:kurbanek@mkkeng.com).





# ANNOUNCEMENTS



## The Rocky Mountain Chapter of ASHRAE Presents...

### “Research to Reality” The 14th Annual Technical Conference & Vendor Expo

Friday, May 12, 2006

#### Featuring:

- Keynote Presentation by Mr. Jim Fields, Director at Large ASHRAE Society Board of Directors
- Four Additional Seminar Tracks featuring presentations on: *Psychrometrics, Air Cooled vs. Water cooled chillers, Pump and Piping design, Basic Steam System Design, Fan Systems and Selections, Modular VAV Systems Design and Application, Stratification and Designing Mixing Systems, Cooling Tower Applications, Dealing with Dampers Design and Code Issues, Kitchen Exhaust Systems Design, Dehumidification Methods with Energy Saving Technology, Introduction to BAS Technology, BAS Design and Criteria, Recommissioning and Building Automation, Advanced Control Strategies, Specifying Interoperable BAS, LEED in Colorado, Energy and Environment*
- Half-day and full-day passes available.
- PDH Credits available (slight additional cost for certificate)

#### Who should attend?

Architects, Engineers, Sales, Contractors, Building Owners, Operators, and Students

Denver Location: Sheraton Denver West Hotel

**360 Union Blvd, Lakewood, CO 80228**

Time: 7:30 AM to 4:30 PM

Cost: \$110.00 full day, \$60.00 half day (lunch not included) if received by May 5, 2006  
\$125.00 full day, \$65.00 half day (lunch not included) if received May 6, 2006 or later

Individual or company registrations available. Company passes may be shared.

10% Discount available for five or more passes for one company

Net proceeds to benefit **ASHRAE Scholarship and Research**

For additional information, contact: Brian Lynch at [brian.lynch@york.com](mailto:brian.lynch@york.com)

Program, Seminars, and Speakers subject to change







# REGISTRATION



## REGISTRATION FORM

14th Annual Technical Conference

Friday, May 12, 2006

Sheraton Hotel Denver West 360 Union Boulevard, Lakewood CO 80228

### "Research 2 Reality"

Presented by:

**The ASHRAE Rocky Mountain Chapter**

*Register by May 5, 2006 to ensure space availability.*

*Checks received after May 6th (or walk-ins the day of the seminar) will be accommodated pending space availability.*

Please photocopy this form for additional attendees and for your records.

#### Individual Registration:

Your Name \_\_\_\_\_ Title \_\_\_\_\_

Company \_\_\_\_\_

Mailing Address \_\_\_\_\_

Phone \_\_\_\_\_ Fax \_\_\_\_\_

#### Company Registration:

Company \_\_\_\_\_

Mailing Address \_\_\_\_\_

Phone \_\_\_\_\_ Fax \_\_\_\_\_

#### Seminar Preference: (This is for space allocation only. You may attend any seminar during the conference.)

Check Your First and Second Preference

**HVACR Fundamentals, Basics**

**HVACR Fundamentals, Advanced Topics**

**Energy and Environment**

**Building Automation**

#### Please register me for...

Please register my company for... \_\_\_\_\_ passes.  
(quantity)

Check Your Preference

Full day @ \$110.00, (Lunch included), (Total Number) \_\_\_\_\_

1/2 day at \$60.00, (Lunch is not included), (Total Number) \_\_\_\_\_

Morning Session

Afternoon Session

**Late Registration, received after after May 5, 2006, will be:**

**\$125.00, (includes lunch), \$65.00 1/2 day, (no lunch)**

10% Discount for 5 or more Company Passes

**Enclosed please find a check for: \$ \_\_\_\_\_ Mastercard/Visa total: \$ \_\_\_\_\_**

Please Make Checks payable to Rocky Mountain Chapter ASHRAE

MC# \_\_\_\_\_ Cardholder Name \_\_\_\_\_ Exp Date: \_\_\_\_\_

VISA# \_\_\_\_\_ Cardholder Name \_\_\_\_\_ Exp Date: \_\_\_\_\_

Please mail check and registration form to:

**Chris Huff - York**

**5855 Stapleton Drive North, Unit A-155**

**Denver, CO 80216**

**Phone: 720-889-1500 Fax: 720-889-1519**

**e-mail: [chris.huff@york.com](mailto:chris.huff@york.com)**

**For questions please contact: Brian Lynch, York International, [brian.lynch@york.com](mailto:brian.lynch@york.com) or fax: 720-889-1519**





## ANNOUNCEMENTS



# **The Rocky Mountain Chapter will be hosting the Regional ASHRAE Conference for 4 days in August of 2008.**

This conference is where chapters in our Region IX get together to discuss chapter business operations. The chapter will be forming committees and needs volunteers for Finance, Events, Entertainment, Publicity, Reception and Registration, Transportation, Golf, Technical Sessions and more.

If you are interested in helping out please contact Scott Martin by email [smartin@rmhgroup.com](mailto:smartin@rmhgroup.com) or phone 303-239-0909.





# EMPLOYMENT LISTINGS



Position: Project Design Engineer  
Company: Design Mechanical  
Web Site: [www.comfortsystemsusa.com](http://www.comfortsystemsusa.com)  
Main Phone: 303-449-2092  
Fax: 303-449-8739  
Address: 168 CTC Blvd, Suite D  
Louisville, CO 80027

Contact: Rich Bengé  
Contact Phone: 303-661-1720  
Contact Email: [rbenge@comfortsystemsusa.com](mailto:rbenge@comfortsystemsusa.com)

## More Info:

Design Mechanical is a full service design/build mechanical contractor with in-house design services that support our construction efforts. Our main office is in Louisville with satellite offices in Eagle and Telluride Colorado. We are seeking an experienced project design engineer to work in our Louisville engineering department. The ideal candidate would have a minimum 5 years of experience in designing commercial HVAC and plumbing systems within a design/build environment. Hydronic system design experience required. PE license is a plus but not a requirement. Design team leadership skills are a plus. Excellent benefit package. Salary commensurate with experience. Please send resume and references to Rich Bengé at the above mailing or email address.

=====  
Position(s): HVAC Project Engineer  
Company: M-E Engineers, Inc.  
Web Site: [www.me-engineers.com](http://www.me-engineers.com)  
Main Phone: 303.421.6655  
Fax: 303.421.0331  
Address: 10055 W. 43<sup>rd</sup> Avenue  
Wheat Ridge, CO 80033

Contact: Trish Lavato  
Contact Phone: 303.421.6655  
Contact Email: [tlovato@me-engineers.com](mailto:tlovato@me-engineers.com)

## More Info:

M-E Engineers, Inc. is an international engineering firm seeking Mechanical Engineers to work on sports facilities, laboratories, health care and commercial projects. Preferred candidates should have 3+ years experience in the design of HVAC systems. These positions require strong technical abilities, organizational skills and attitude. PE preferred. Excellent salary and benefit package. Send resumes to: M-E Engineers, Inc. Attn: Trish Lovato or e-mail [tlovato@me-engineers.com](mailto:tlovato@me-engineers.com).





# EMPLOYMENT LISTINGS



Position(s): Electrical Engineer, Mechanical Engineer  
Company: The RMH Group, Inc.  
Web Site: [www.rmhgroup.com](http://www.rmhgroup.com)  
Main Phone: 303 239 0909 Fax: 303 312 4609  
Address: 12600 W Colfax Ave Suite A400, Lakewood CO 80215  
Contact: Jill Patterson  
Contact Phone: 303 239 2761  
Contact Email: [jpatterson@rmhgroup.com](mailto:jpatterson@rmhgroup.com)

The RMH Group, a high-quality consulting engineering company, is looking for several above-average engineering candidates. RMH has been around for over 40 years serving national and international clients. In addition, we are one of the leading engineering companies for sustainable design. We have two divisions, commercial/institutional and industrial. If you like to learn, grow, and share your knowledge with a great team, this is the place for you!

We offer a competitive compensation package including flex schedule, medical, dental, vision, 401(k), recruitment bonuses, tuition assistance, generous paid time off including paid holidays and vacation/sick time, disability, life, supplemental life, flex plan, financial planning assistance, credit union membership, and a solid chance to advance yourself and your career. RMH is an EEO/AA, M/F/D/V employer.

**Electrical Engineer** We're looking for an electrical engineer with a BSEE and 2-5 years of hands-on design experience in AutoCAD for our Industrial Process Division. Power/lighting/controls experience is very helpful. Good people skills are extremely important. Please reference EEIPD406A.

**Mechanical Engineers** If you're a mechanical engineer with a BSME and 3-5 years of hands-on HVAC design experience in AutoCAD, we may have a place for you in our Building Systems Division. Experience with commercial and institutional projects (non-industrial) is needed, such as office buildings, schools, etc. Sustainable design experience is especially helpful. Experience with plumbing and fire protection is a plus and people skills are very important. Please reference MEBSD406A.

(If you have similar education and experience, but in industrial projects, feel free to send us your resume. We may have an opening in our Industrial Process Division.) Please use reference code MEIPD406A.

=====  
Position(s): Mechanical Engineer, Electrical Engineer  
Company: Shaffer Baucom Engineering and Consulting  
Web Site: [www.sbenegr.com](http://www.sbenegr.com)  
Main Phone: 303-986-8200 Fax: 303-986-8222  
Address: 7333 W. Jefferson Avenue, Denver, CO  
Contact: Ellie Dugle  
Contact Phone: 303-986-8200  
Contact Email: [edugle@sbenegr.com](mailto:edugle@sbenegr.com)

**Mechanical Engineer:** Shaffer Baucom Engineering and Consulting is seeking a Mechanical Engineer to join our team. Successful candidate will have 5+ years experience, preferably in a consulting engineering environment and be experienced in the design of HVAC and plumbing systems. Healthcare, Educational and Laboratory experience a plus. Bachelors Degree and PE required. Excellent compensation package. Please submit resume and salary history to [edugle@sbenegr.com](mailto:edugle@sbenegr.com).

**Electrical Engineer:** Shaffer Baucom Engineering and Consulting is seeking an Electrical Engineer to join our team. Successful candidate will have a minimum of 5+ years experience, preferably in a consulting engineering environment and be experienced in the design of building power, lighting and fire alarm systems. Healthcare, Educational and Laboratory experience a plus. Bachelors Degree and PE required. Excellent compensation package. Please submit resume and salary history to [edugle@sbenegr.com](mailto:edugle@sbenegr.com).





# EMPLOYMENT LISTINGS



Position(s): Mechanical Engineer/Designer  
Company: Cator, Ruma & Associates  
Web Site: [cra@catorruma.com](mailto:cra@catorruma.com)  
Main Phone: 303-232-6200  
Fax: 303-233-3701  
Address: 1550 Dover St., Suite 2, Lakewood, CO 80215

Contact: Gina Jacobsen  
Contact Phone: 303-232-6200  
Contact Email: [cra-resumes@catorruma.com](mailto:cra-resumes@catorruma.com)

We design healthcare, educational and commercial facilities. We offer an excellent benefit package (salary, medical, 401K) with Friday afternoons off.

=====  
Position: Design Engineer  
Company: Integrated Mechanical, LLC  
Main Phone: 970-556-0570  
Fax: Toll free 800-656-4359  
Address: 2601 S. Lemay #7-421, Fort Collins, CO 80525  
Contact: Thomas Segelhorst  
Contact Phone: 970-556-0570  
Contact Email: [integrated-mech@comcast.net](mailto:integrated-mech@comcast.net)

Qualified candidates shall have a BS Degree in Mechanical Engineering with a minimum 3 years of experience in HVAC/Plumbing design. Work history MUST include design of HVAC and plumbing systems for commercial buildings. Residential design experience may also be helpful. Working knowledge of AutoCAD is necessary. This position will include project management, engineering design, supervising system installation, and assisting other engineers in job completion. Integrated Mechanical is a privately-owned design firm that strives for the highest quality service possible. We offer a stable working environment for our employees.

=====  
Position: HVAC Project Engineer  
Company: The Ballard Group, Inc.  
Web Site: [www.theballardgroup.com](http://www.theballardgroup.com)  
Main Phone: 303 988 4514  
Fax: 303 988 4517  
Address: 2525 S. Wadsworth Blvd., Suite 200, Lakewood, CO 80227  
Contact: Steve Franz  
Contact Phone: 303 988 4514  
Contact Email: [sfranz@theballardgroup.com](mailto:sfranz@theballardgroup.com)

The ideal candidate will have a minimum of 4 years HVAC design experience and enjoys working on a wide variety of project types. The Ballard Group is an HVAC design firm with 20 employees. We have been in business since 1978 and work primarily on healthcare, education and fitness center projects.





# EMPLOYMENT LISTINGS



Position(s): Preconstruction Manager / Preconstruction Project Engineer  
Company: U.S. Engineering Company  
Web Site: **[www.usengineering.com](http://www.usengineering.com)**  
Main Phone: 303-964-8060  
Fax: 303-964-8063  
Address: 729 S.E. 8<sup>th</sup> St  
Loveland, CO 80210

Contact: Dan Strait  
Contact Phone: 303-964-8060  
Contact Email: [dstrait@usengineering.com](mailto:dstrait@usengineering.com)

More Info:

## **Preconstruction Manager**

U.S. Engineering Company is seeking to hire a preconstruction manager for a permanent position in the Colorado Region. U.S. Engineering Company is one of Colorado's leading mechanical contractors providing high quality piping, plumbing, and sheetmetal services. Desired candidates shall have previous experience in preconstruction services or a minimum of 4 years experience in the design of HVAC and plumbing systems. P.E. preferred but not required. Position includes but not limited to: budget management, conceptual & schematic level systems design of plumbing, piping, & HVAC systems; conceptual estimating and value engineering; proposal preparation and presentation. Candidate must have good communication skills. Salary & benefits competitive. If interested, please contact Dan Strait 303-964-8060. U.S. Engineering Company is an equal opportunity employer. Visit our website at **[www.usengineering.com](http://www.usengineering.com)**

## **Preconstruction Project Engineer**

U.S. Engineering Company is seeking to hire a preconstruction project engineer for a permanent position in the Colorado Region. U.S. Engineering Company is one of Colorado's leading mechanical contractors providing high quality piping, plumbing, and sheetmetal services. Degree in mechanical engineering or architectural engineering required. Entry level up to 2 years experience in mechanical consulting engineering preferred. Position includes but not limited to: Conceptual & schematic level systems design of plumbing, piping, & HVAC systems. Additionally, position includes conceptual estimating, value engineering & proposal preparation. Candidate must have good communication skills. Salary & benefits competitive. If interested, please contact Dan Strait 303-964-8060. U.S. Engineering Company is an equal opportunity employer. Visit our website at **[www.usengineering.com](http://www.usengineering.com)**





# EMPLOYMENT LISTINGS



Company: EMC Engineers, Inc.  
Web Site: [www.emcengineers.com](http://www.emcengineers.com)  
Main Phone: 303-974-1200  
Fax: 303-974-1239  
Address: 143 Union Blvd, Suite 350  
Lakewood, CO 80228  
Contact: Don Davenport  
Contact Phone: 303-974-1219  
Contact Email: [ddavenport@emcengineers.com](mailto:ddavenport@emcengineers.com) (for all positions below)

Company Background - EMC Engineers has specialized in improving building operations and energy efficient building design and performance for 30 years. We provide commissioning, retro-commissioning, energy analysis/modeling, sustainable design and turn-key design/build services for a full range of clients including government, commercial, utility, institutional, K-12, and industrial. Our services focus on HVAC and control systems, electrical lighting, lighting, daylighting, and other mechanical systems such as geo-exchange, evaporative cooling and other low energy concepts. Substantial revenue growth in our core business areas has resulted in multiple position opportunities in our commissioning, energy, sustainable design, and design/build teams. EMC provides our services for clients throughout the US, so ability to travel periodically will be required. EMC currently has 5 offices nationwide. Positions are available in our Colorado office and in our Southern California office.

## **Position(s): Junior and Staff Commissioning Engineers (Colorado and California)**

EMC needs motivated Junior and Staff engineers to join our commissioning team. Junior engineers should possess 0 to 2 years of experience and Staff Engineers should possess 4 to 8 years of experience, with B.S. in Architectural or Mechanical Engineering (non-degreed persons may be considered given an equivalent amount of field experience in HVAC and controls systems). Candidates must possess strong communication skills, strong analytical capability, good contractor relationship skills, "hands on" operations interest, including experience with energy simulation modeling and system testing. Technical interest in HVAC and control systems troubleshooting, assessment, testing, programming, and commissioning are expected. Experience or strong interest in high performance buildings, sustainable design, LEED projects, and building envelope or electrical systems would be considered a "plus." Junior engineer positions in EMC also provide exposure to energy modeling and sustainable design project tasks, so a desire to execute differing kinds of engineering work will be required.

## **Position(s): Junior and Staff Energy Engineers (Colorado)**

EMC needs motivated Junior and Staff engineers to join our energy team. Junior engineers should possess 0 to 4 years of experience and Staff Engineers should possess 4 to 8 years of experience, with B.S. or M.S. in Architectural or Mechanical Engineering, and either a P.E. or working toward P.E. for Staff level candidates. Candidates must be conscientious, with strong analytical capability (thermodynamics, heat transfer, daylighting) including experience with energy simulation modeling and HVAC system troubleshooting and assessment. Experience or strong interest in high performance buildings, sustainable design, LEED projects, and building envelope or electrical systems would be considered a "plus." Junior positions will also provide exposure to design and commissioning projects periodically, so a desire to execute differing assignments will be required.

*positions continued on next page*







# EMPLOYMENT LISTINGS



Company: EMC Engineers, Inc.  
Web Site: [www.emcengineers.com](http://www.emcengineers.com)  
Main Phone: 303-974-1200  
Fax: 303-974-1239  
Address: 143 Union Blvd, Suite 350  
Lakewood, CO 80228  
Contact: Don Davenport  
Contact Phone: 303-974-1219  
Contact Email: [ddavenport@emcengineers.com](mailto:ddavenport@emcengineers.com) (for all positions below)

## **Position(s): Junior and Staff Mechanical Design Engineers (Colorado)**

We are looking for motivated Junior and Staff level mechanical design engineers to join our mechanical design team. Successful Junior candidates should possess 0 to 4 years of experience, successful Staff level candidates should possess 4 to 8 years of experience. A B.S. in Mechanical or Architectural Engineering, and either a P.E. or working toward P.E. for Staff level candidates. Candidates must possess strong analytical skills, good team skills, and thorough technical understanding of mechanical system analysis, design, and specifications. Technical focus for this position will be work in HVAC, plumbing and control systems. Experience with high performance buildings, sustainable design, and LEED projects, while not mandatory, would be considered a "plus." Junior positions will also provide exposure to energy modeling, sustainable design, and commissioning project tasks, so a desire to execute differing kinds of engineering work will be required.

## **Position(s): Staff Electrical Engineer (Colorado)**

We are looking for an electrical engineer to join our team. Successful Staff level candidates should possess 4 to 8 years of experience. A B.S. or M.S. in Electrical Engineering, and either a P.E. or working toward P.E. Candidates must possess strong analytical skills, good team skills, and thorough technical understanding of electrical system analysis, design, and specifications. Technical focus for this position will be work in lighting, daylighting, and power distribution in buildings. Experience with high performance buildings, sustainable design, and LEED projects, would be considered a "plus." This position will also support assigned tasks in our energy and commissioning teams, so ability to be flexible in work assignments is required.

## **Position(s): Design/Build Project Manager (Colorado)**

We are looking for strong project manager to join our design/build services unit. Successful candidates should possess a minimum of 10 years of full spectrum project management experience (energy assessments, design, construction oversight, and commissioning) with a B.S. in Architectural or Mechanical Engineering or Construction Engineering or for a non-degreed person, an equivalent amount of experience. P.E. or working toward a P.E. is a plus. Candidates must possess strong communication skills, outstanding client relationship building skills, full understanding of the complete design/build delivery process for energy improvement projects, good contractor relationship skills, "hands on" operations interest, and ability to be flexible with multiple project work assignments, including understanding energy modeling, design, and system testing. Technical excellence in HVAC and control systems troubleshooting, assessment, testing, programming, and commissioning are expected. Experience with high performance buildings, sustainable design, LEED projects, and building envelope or electrical systems, and energy savings performance contracting would be considered a "plus."





# MEMBERSHIP PROMOTION



Welcome to the “The Membership Promotion Page.” Please take a close look at the chapter's roster located at [www.rockymtnashrae.com](http://www.rockymtnashrae.com) for the following:

1. If you are a member of ASHRAE (student, associate, member, etc.) your name should be included within the roster.
2. If you have requested that your contact address be your residential address, I have only included your name and the city and state of your residence.
3. If you have requested that your contact address be your business address, I have included your name, the business name and mailing address, and your email address.
4. If a “0” appears where your email address should be, ASHRAE does not have an email address for you assuming your contact address is your business address.
5. Your name appears in the same format ASHRAE has it recorded. I have not attempted to add “Dr”, “PE”, “PhD” or other pertinent information that ASHRAE does not have.
6. If any of your information is incorrect, or if you want changes made to your information, please send an email to [larry@acemechanical.com](mailto:larry@acemechanical.com) and I will make the requested changes.
7. If you have been omitted from this list and want to know why, please send an email to [larry@acemechanical.com](mailto:larry@acemechanical.com) and I will research why ASHRAE is not including you. Common reasons for omission include human error and unpaid ASHRAE membership dues.





NAME: \_\_\_\_\_  
 (LAST) (FIRST) (MI)

STATUS: RENEWAL\_\_\_\_ NEW MEMBER\_\_\_\_ ADDRESS CHANGE\_\_\_\_

PLEASE CIRCLE PREFERRED MAILING ADDRESS:  
 HOME ADDRESS & PHONE

BUSINESS NAME, ADDRESS & PHONE

\_\_\_\_\_  
 \_\_\_\_\_

\_\_\_\_\_  
 \_\_\_\_\_

p: \_\_\_\_\_

p: \_\_\_\_\_

Preferred email address: \_\_\_\_\_

Society Membership No.: \_\_\_\_\_

Name Tag (\$10.00) PAID? Y N

Name to appear on name tag as: \_\_\_\_\_

I WOULD LIKE TO BE CONTACTED ABOUT SERVING ON ONE OF THE FOLLOWING COMMITTEES OR FUNCTIONS  
 (PLEASE CIRCLE).

- A. NEWSLETTER
- B. MEMBERSHIP
- C. MEETING ATTENDANCE
- D. EDUCATION
- E. GOLF
- F. CHAPTER HISTORIAN
- G. TECHNICAL SEMINARS

- H. RESEARCH FUND PROMOTIONS
- I. MONTHLY MEETING PROGRAMS
- J. PUBLICITY
- K. SPOUSE'S NIGHT / SOCIAL COMMITTEE
- L. COLORADO ENGINEERING COUNCIL
- M. GENERAL (COMMITTEE HELP)
- N. ENERGY COMMITTEE

PLEASE MAIL THIS INVOICE AND YOUR CHECK FOR \$35.00 + \$10.00 (PAYABLE TO ROCKY MOUNTAIN CHAPTER ASHRAE) TO THE ADDRESS BELOW. SOCIETY WILL INVOICE YOU FOR BOTH SOCIETY AND LOCAL DUES EVERY YEAR FOLLOWING THIS FIRST YEAR:

Larry Hodgins, 13271 Holly St #F, Thornton CO 80241

membership@rockymtnashrae.org



## FIRST CLASS

Chapter may not act for Society. Expressions,  
opinions, and comments within this newsletter should  
not be taken as those of the Chapter or Society.

Rocky Mountain Chapter of ASHRAE  
c/o Justin Dunkin  
CFM Company  
1495 S. Platte River Dr.  
Denver, CO 80223  
303-607-4444



## ACTIVITIES CALENDAR



For membership info or change of address contact: Larry Hodgins • [larry@acemechanical.com](mailto:larry@acemechanical.com)

May 3, 2006

TBD / Tour

May 12, 2006

ASHRAE Technical Conference  
& Vendor Expo

June 26, 2006

ASHRAE Golf Tournament  
Hiwan Golf Club

Visit the new Rocky Mountain ASHRAE website:

[www.rockymtnashrae.com](http://www.rockymtnashrae.com)



NEWSLETTER OF THE ROCKY MOUNTAIN CHAPTER  
AMERICAN SOCIETY OF HEATING, REFRIGERATING, AND AIR-CONDITIONING ENGINEERS, INC.

Volume 48, Number 1

SEPTEMBER 2006

Editor: Ken Urbanek

Visit the new Rocky Mountain ASHRAE website:  
[www.rockymtnashrae.com](http://www.rockymtnashrae.com)

**Date:** September 6, 2006

**Cost:** Rocky Mtn Chapter Members-\$25\*

\*With Reservations Made Before Monday Noon

**Dinner** Wynkoop Brewing Company

**Location:** 1634 18th St.

Denver, CO 80202

(Downtown, Corner of 18<sup>th</sup> & Wynkoop)

Guests, Non-members or Without Reservation - \$30

Students - \$20

**RSVP:** Justin Dunkin

E-mail: [justind@cfmcompany.com](mailto:justind@cfmcompany.com)

**Time:** 5:30 Social Hour (Wynkoop)

6:30 Dinner (Wynkoop)

7:00 Program Begins (Wynkoop)



## SEPTEMBER PROGRAM



### Commercial Closed Loop Ground Source Heat Pump Systems: What Every Mechanical Engineer Should Know!

*Terry Proffer, CGD  
Major Geothermal, Wheat Ridge, CO*

This presentation will be concerned with what mechanical engineers need to be aware of when designing a closed loop ground source heat pump system. Terry's presentation will cover preliminary evaluation and design criteria, criticality of accurate peak and duration load calculations, selection of GSHP equipment, and the importance of these variables for preliminary ground loop ranges before specifying parameters for a thermal conductivity test. Examples of final loop designs will illustrate how these components come into play for a complete system. Aspects of source-side commissioning will complete the presentation.

Terry Proffer, CGD, has been involved in the GSHP industry since 1993. Terry is also an IGSHPA Certified Trainer and IGSHPA Accredited Installer. He spent the previous 15 years in the oil industry as a geologist. Terry began installing small residential systems and progressed to larger commercial applications, apprenticing under experienced GSHP mechanical contractors and loop installers. Terry's experience progressed to design work, including "trophy" homes, schools and office buildings, with successful applications extending beyond space conditioning to snowmelt, large dedicated domestic hot water load heating and industrial process water conditioning, from Maine to California. In July of 2001, Terry joined Major Geothermal. In addition to GSHP product distribution, Major Geothermal provides evaluation, loop design and thermal conductivity test specifications, consulting, on-site installation oversight, commissioning and training services for contractors and mechanical engineers.

Scott Martin, PE  
Vice President - Programs  
Rocky Mountain Chapter of ASHRAE



# ROCKY MOUNTAIN ROSTER



September 2006-2007

|                     |                 |                                                                                  |
|---------------------|-----------------|----------------------------------------------------------------------------------|
| President           | Kevin Parrot    | <a href="mailto:KevinP@trinity-mechanical.com">KevinP@trinity-mechanical.com</a> |
| President Elect     | Brian Lynch     | <a href="mailto:blynch@bigassfans.com">blynch@bigassfans.com</a>                 |
| Vice President      | Scott Martin    | <a href="mailto:smartin@rmhgroup.com">smartin@rmhgroup.com</a>                   |
| Secretary           | Jeremy Hollands | <a href="mailto:jhollands@catorruma.com">jhollands@catorruma.com</a>             |
| Treasurer           | Justin Dunkin   | <a href="mailto:justind@cfmcompany.com">justind@cfmcompany.com</a>               |
| Newsletter Editor   | Ken Urbanek     | <a href="mailto:kurbanek@mkkeng.com">kurbanek@mkkeng.com</a>                     |
| Membership          | Larry Hodgins   | <a href="mailto:larry@acemechanical.com">larry@acemechanical.com</a>             |
| Refrigeration       | Dave Rodenberg  | <a href="mailto:drodenberg@long.com">drodenberg@long.com</a>                     |
| Historian           | Steve Maxson    | <a href="mailto:smaxson@sbengr.com">smaxson@sbengr.com</a>                       |
| Technology Transfer | Ken Urbanek     | <a href="mailto:kurbanek@mkkeng.com">kurbanek@mkkeng.com</a>                     |
| Resource Promotions | Brian Lynch     | <a href="mailto:blynch@bigassfans.com">blynch@bigassfans.com</a>                 |
| Web Master          | Kyle Manske     | <a href="mailto:kmanske@comfortsystemsusa.com">kmanske@comfortsystemsusa.com</a> |
| Education Chairman  | Kevin Ainsworth | <a href="mailto:kainsworth@mcgrath-inc.com">kainsworth@mcgrath-inc.com</a>       |
| Director            | Mark Jelinske   | <a href="mailto:mjelinske@catorruma.com">mjelinske@catorruma.com</a>             |
| Director            | Kevin Ainsworth | <a href="mailto:kainsworth@mcgrath-inc.com">kainsworth@mcgrath-inc.com</a>       |
| Past President      | John Stumpf     | <a href="mailto:john.stumpf@york.com">john.stumpf@york.com</a>                   |







## PRESIDENT'S MESSAGE



Dear Rocky Mountain ASHRAE:

Welcome back to what promises to be another great and informative year of ASHRAE. I would like to thank our out going President John Stumpf for his hard work and dedication to our organization. He worked hard for a number of years as he moved up through the chairs of the board of Governors and has even volunteered to work on the CRC (Chapter's Regional Conference) Committee for the quickly approaching 2008 Denver CRC.

Member's of the board and I just returned from this year's CRC in Kansas City. It was a good time and productive for our region. Our Chapter received a number of awards and acknowledgements including PAOE, a Gold ribbon for Chapter Giving (over \$5,000 given by the Chapter to Research), Dollar's per Member Given to Research, and a number of CTTC awards and certificates. A summary of regional motions passed for forwarding on to the Society level will be given at the September meeting for those interested.

If you haven't made it to a CRC you should make it a point to attend the 2007 or 2008 events. It shouldn't be a stretch, 2007's CRC will be hosted by the Pike's Peak Chapter in Colorado Springs and the following year our Chapter will be hosting. Scott Martin and John Stumpf are currently looking for volunteers. Please contact either of them if you are interested.

I would like to congratulate Ken Urbanek on his election to the Board of Governors. Ken has worked with the Board over the last few years as the chair of the CTTC committee. I am excited for the addition he makes. I know he will bring the same enthusiasm to the newsletter and future chairs that he did for CTTC. Thanks go out to Kate Allen for her years of volunteering to ASHRAE, most recently her two year term as a Director and Advisor to the Board. Kevin Ainsworth accepted the request to fill Kate's shoes as a Director for a two year term.

In closing I am looking forward to working for you and the chapter over the next year as your President. If you have questions or concerns please feel free to email, phone, or just grab me during one of our month meetings.

Kevin Parrot  
President, Rocky Mountain Chapter ASHRAE  
[kevinp@trinity-mechanical.com](mailto:kevinp@trinity-mechanical.com)



## PAST PRESIDENT'S MESSAGE



Dear Rocky Mountain ASHRAE:

Thanks for the memories and I look forward to seeing everyone in September!

John Stumpf  
Past President, Rocky Mountain Chapter ASHRAE  
[john.stumpf@york.com](mailto:john.stumpf@york.com)







## The Latest in Technical, Energy, and Government Activities

### ASHRAE Technology Awards Rocky Mountain Chapter and Region IX Winners Announced

Each year the Society reviews applications for Technology Awards in seven categories: Commercial Buildings; Institutional Buildings; Health Care Facilities; Industrial Facilities or Processes; Public Assembly; Residential and Alternative or Renewable Energy Use. This past year the Rocky Mountain Chapter of ASHRAE had two Technology Award Winners, one of which received a Regional Award and now will contend for a Society Level Award.

Rocky Mountain Chapter Award: Category of New Industrial Facilities or Processes, Colorado Springs Utilities Water Chemistry Laboratory, Richard E. Phillips and Mark Griggs with The RMH Group, Inc and Renee Azerbegi with Ambient Energy.

Region IX and Rocky Mountain Chapter Award: Category of New Institutional Building, Poudre School District - Fossil Ridge High School, Craig A. Watts with MKK Consulting Engineers, Inc.

We congratulate our local winners and wish them the best of luck for those moving onto the Society Level competition. It's not too early to consider entering a project into this coming years Technology Awards, just fill out the Chapter Technology Award Application (Short Form), available at the monthly meeting or contact CTTC Chair Ken Urbanek at [kurbanek@mkkeng.com](mailto:kurbanek@mkkeng.com) for an application. All applications are due by April 4th, 2007 and local recipients of the Technology Award will be announced at the final Chapter meeting in May.

### ASHRAE Pursues Certification Program

ATLANTA In response to member and market demand, ASHRAE is exploring a certification program that will focus on areas of the building environment such as commissioning, health care facility engineering, building operation, and sustainability. "By offering certification, ASHRAE will make our members more valuable to the industry," Terry Townsend, P.E., ASHRAE president, said. "Certification from ASHRAE will add professional credibility to their work, as well providing educational resources to better enable them in designing and operating buildings that are more efficient."

"The Learning Institute will continue to provide fundamental courses for those looking for lifelong learning and professional development," Townsend said. "But we also must provide more specialty courses for those eager to keep up with the latest technology." The program is expected to launch in summer 2007.

For more information please refer to the ASHRAE website at [www.ashrae.org](http://www.ashrae.org).

### ASHRAE Satellite Broadcasts Confirmed for the Fall of 06' and the Spring 07'

Tuesday, November 14, 2006 has been confirmed for the "Multiple Benefit Solutions for Enhanced Building Security" Satellite Broadcast/Webcast. ASHRAE Presidential Ad Hoc Homeland Security Committee sponsors this free program.

Thursday, April 19, 2007, has been confirmed for the Chapter Technology Transfer Committee free Satellite Broadcast/Webcast. This free program will focus on "Indoor Air Quality."

If you have any questions regarding Technical, Energy, and Government Activities with respect to ASHRAE please contact local Chapter Technology Transfer Committee Chair Ken Urbanek via e-mail at [kurbanek@mkkeng.com](mailto:kurbanek@mkkeng.com).





## REGIONAL CONFERENCE 2008



The Rocky Mountain Chapter will be hosting the Regional ASHRAE Conference for 4 days in August of 2008. This conference is where chapters in our Region IX get together to discuss chapter business operations. The chapter will be forming committees and needs volunteers for Finance, Events, Entertainment, Publicity, Reception and Registration, Transportation, Golf, Technical Sessions and more. If you are interested in helping out please contact either Scott Martin (e-mail [smartin@rmhgroup.com](mailto:smartin@rmhgroup.com) / phone 303-239-0909) or John Stumpf (email [john.stumpf@york.com](mailto:john.stumpf@york.com) / phone 303-904-7928)



## ANNOUNCEMENTS



### AIHA-RMS/ASSE 12 Annual OEHS Conference 2006

### ANNUAL CALIBRATION REQUIRED

October 17-18, 2006

Arvada Center for the Performing Arts  
6901 Wadsworth Blvd. Arvada, Colorado

This year's edition of the annual fall conference will feature half-day workshops including emergency response, control banding/global harmonization, accident prevention and exposure/risk assessment methods; an environmental, health and safety (EHS) management roundtable; and floor presentations on a variety of industrial hygiene and safety subjects such as nanotechnology, toxicology, improving reports and data presentations, pandemic response, and more! In addition, there will be a vendor area on Day 1 featuring an evening social event (yes that means free food!) and an AED demonstration.

Details available on the AIHA-RMS website at <http://www.aiha-rms.org>





# ANNOUNCEMENT



## PLAN TO BE THERE!

The 5th Annual  
Advanced Facilities  
**MANAGEMENT & ENGINEERING**  
CONFERENCE

**NOVEMBER 8 – 9, 2006**

**Denver Merchandise Mart - Expo Hall**

For information contact: ExpoMasters, Inc.  
Phone 303-771-2000, Fax 303-843-6232

Email [lcramer@expomasters.com](mailto:lcramer@expomasters.com)

Web Site [www.afec.biz](http://www.afec.biz)

### **"Stay Ahead of the Learning Curve"**

**Advance your skills - Increase your knowledge**

- 30 seminars, featuring leaders in both facility and engineering management.
- Excellent networking opportunities.
- Informative exhibits and technical demonstrations.
- Keynote luncheon speaker: Clarence "Cal" Marsella, General Manager, RTD - FasTracks
- Plus door prizes, free latte, free beer tasting each afternoon.

### **BE SURE YOU SAVE THESE DATES!**

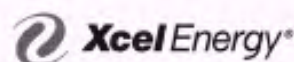
**Wednesday – November 8th**

**Thursday – November 9th, 2006**

*Reach a quality audience with information  
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# EMPLOYMENT LISTINGS



## SEPTEMBER EMPLOYMENT LISTINGS

Position(s) : HVAC Controls and Building Automation - Application Engineer  
HVAC Controls and Building Automation - AutoCAD/Graphics Designer

Company: Setpoint Systems Corporation  
Web Site: [www.setpointsystems.com](http://www.setpointsystems.com)  
Main Phone: 303-733-2300  
Fax: 303-733-2333  
Address: 8167 SouthPark Circle  
Littleton, CO. 80120

Contact: Alan Hill  
Contact Phone: 303-733-2300  
Contact Email: [ahill@setpointsystems.com](mailto:ahill@setpointsystems.com)

### More Info:

Setpoint Systems Corporation, incorporated in 1983, is one of the largest independent building automation/facility systems integrators in the Rocky Mountain area. Setpoint is an award winning temperature controls contactor, based in Denver, Colorado, serving Colorado, New Mexico, and Wyoming. We are the number one distributor of Delta Controls automation systems in the United States. Setpoint designs, installs and services complete building management, monitoring and information driven systems. From the boiler room-to-the-board room Setpoint integrates various building control systems with dissimilar manufacturers and with management information systems. Setpoint provides a common and open architecture that delivers consistent temperature controls, card access, lighting, energy management, security, CCTV and fire alarm systems capabilities for each facility or institutional structure. Setpoint Systems Corporation offers a complete benefits/health package, including 401K contribution matching and tuition reimbursement. EOE M/F/D/V.

### **Applications Engineer:**

Due to our rapid growth, we are in search of Engineers to design control systems for HVAC applications. Position requires experience with AutoCAD; working knowledge of DDC, electric and pneumatic control systems for commercial, industrial and institutional buildings; and excellent analytical and organizational skills. Additionally, experience with CCTV, access control, and fire alarm systems would be ideal. Extensive product training provided by employer. Salary commensurate with experience.

### **AutoCAD/Graphics Designer:**

Due to our rapid growth, we are in search of AutoCAD/Graphics Designers to prepare engineering drawings and graphics for HVAC control applications. Position requires experience with AutoCAD and graphics design for DDC, electric and pneumatic control systems for commercial, industrial, and institutional buildings. Additionally, experience with CCTV, access control, and/or fire alarm systems would be ideal. Extensive product training provided by employer. Salary commensurate with experience.





# EMPLOYMENT LISTINGS



Position(s): Mechanical Engineer P.E. & Electrical Engineer P.E.  
Company: Shaffer Baucom Engineering & Consulting  
Web Site: sbengr.com  
Main Phone: 303.986.8200  
Fax: 303.986.8222  
Address: 7333 W. Jefferson Ave., Suite 230 Lakewood, CO 80235

Contact: Ellie Dugle  
Contact Phone: 303.986.8200  
Contact Email: edugle@sbengr.com

## More Info:

Shaffer Baucom Engineering & Consulting is a mechanical & electrical consulting firm in Lakewood, CO. Principals of the firm have served owners/clients in the Denver area for over 25 years. The ideal candidate would have a minimum of 7 years experience as a consulting engineer. PE license is required. We have an excellent benefit package. We offer a very competitive salary and bonus program. Please send your resume and references to Ellie Dugle at the above mailing or email address.

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Position: Project Design Engineer  
Company: Design Mechanical  
Web Site: www.comfortsystemsusa.com  
Main Phone: 303-449-2092  
Fax: 303-449-8739  
Address: 168 CTC Blvd, Suite D  
Louisville, CO 80027

Contact: Rich Bengé  
Contact Phone: 303-661-1720  
Contact Email: rbenge@comfortsystemsusa.com

## More Info:

Design Mechanical is a full service design/build mechanical contractor with in-house design services that support our construction efforts. Our main office is in Louisville with satellite offices in Eagle and Telluride Colorado. We are seeking an experienced project design engineer to work in our Louisville engineering department. The ideal candidate would have a minimum 5 years of experience in designing commercial HVAC and plumbing systems within a design/build environment. Hydronic system design experience required. PE license is a plus but not a requirement. Design team leadership skills are a plus. Excellent benefit package. Salary commensurate with experience. Please send resume and references to Rich Bengé at the above mailing or email address.







# EMPLOYMENT LISTINGS



Company: EMC Engineers, Inc.  
Web Site: [www.emcengineers.com](http://www.emcengineers.com)  
Main Phone: 303-974-1200  
Fax: 303-974-1239  
Address: 143 Union Blvd, Suite 350  
Lakewood, CO 80228

Contact: Don Davenport  
Contact Phone: 303-974-1219  
Contact Email: [ddavenport@emcengineers.com](mailto:ddavenport@emcengineers.com) (for all positions below)

## **HVAC Engineering Opportunities**

EMC Engineers is a national organization, specializing in energy analysis, assessments, sustainable design, commissioning and retro-commissioning of HVAC and control systems in buildings. Our staff specializes in HVAC, Controls and Lighting systems in buildings including evaluating, analyzing, testing, designing and implementing improvements in building mechanical and electrical systems to reduce energy consumption, improve the interior environment, and enhance building operations. We have been performing these services for 30 years on a national and international scale.

Our clients include institutional, government, commercial, healthcare, and K12 markets as well as numerous utility sector clients. Our work is varied and provides exceptional opportunities to solve new problems in new and existing buildings with each project we undertake. You will find our work challenging, rewarding and technically advanced.

Growth opportunities exist in our Denver Headquarters office for the following HVAC engineering positions:

### **Senior HVAC Project Manager:**

Successful candidate must demonstrate ability to lead work and manage core service projects and project staff. Position requires minimum BSME in Mechanical or HVAC Engineering, registered Professional Engineer, with 10 to 20 years experience in:

- Assessment and evaluation of HVAC systems in multiple building types
- Knowledge of HVAC control systems and optimizing building HVAC operations
- Strong analytical capability in energy analysis and energy use in building HVAC and lighting systems
- Experience in building systems audits, commissioning and retro-commissioning
- Ability to lead and mentor project technical staff
- Strong client and internal communication skills
- Proven ability to develop project plans and manage projects to successful schedule, budget and technical outcomes
- Ability to develop new business opportunities and projects in our core business delivery technical service areas with internal marketing support
- Experience with design of HVAC and particularly high performance buildings a definite plus, include LEED AP certification





# EMPLOYMENT LISTINGS



Successful candidate should have a strong background in the inspection, construction, operations, and/or design of building HVAC systems and building automation systems. Knowledge of electrical systems, fire protection, fire alarm, and other MEP systems a plus. Strong computer skills a must. Will consider possible relocation assistance for the right candidate.

## **Staff HVAC Engineers**

Position requires motivated Mechanical or HVAC engineers to join our team. Minimum requirements are BSME in Mechanical, HVAC, or Architectural Engineering, registration as Professional Engineer highly desirable, and 4 to 10 years of experience in:

- Assessment and evaluation of HVAC systems in buildings
- Knowledge of HVAC controls and building HVAC operations
- Analytical energy analysis capability including energy simulation modeling
- Experience in building systems audits, commissioning or retro-commissioning a plus
- Solid communication skills
- Desire to develop project plans and manage assigned projects
- Experience with design of HVAC systems and high performance buildings a definite plus, include LEED AP certification

Candidates must possess good contractor relationship skills, “hands on” operations interest, including HVAC and Control systems testing. Technical interest and focus in HVAC and control systems troubleshooting, assessment, audits, testing, programming, commissioning and retro-commissioning are expected.

## **Position Responses:**

For the positions open above, please respond noting specifically which position you are applying for (include cover letter and resume) to the contact listed.

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Position: Mechanical/Energy Engineer  
Company: PCD Engineering Services, Inc.  
Web Site: [www.pcdengineering.com](http://www.pcdengineering.com)  
Main Phone: 303-678-1108  
Fax: 303-678-1142  
Address: 184 Wetterhorn Way Longmont CO 80501

Contact: Peter D'Antonio  
Contact Phone: 303-678-1108  
Contact Email: [peter@pcdengineering.com](mailto:peter@pcdengineering.com)







# EMPLOYMENT LISTINGS



**PCD Engineering Services, Inc.** is a firm focused on the client and the environment offering sustainable mechanical/electrical design engineering, energy management, and integrated building system solutions.

Interested in working in a growing engineering firm? Interested in being a part of challenging, innovative projects? We are seeking talented individuals ready to contribute to a dynamic and fun working environment.

## Mechanical Engineer

Successful candidate will have 3+ years experience in the design of HVAC and plumbing systems. Candidate will be working on a wide variety of project types including new construction and facility renovations. Experience in energy efficient design and analysis, building energy modeling and sustainable design a plus. Please submit resume and salary history to [peter@pcdengineering.com](mailto:peter@pcdengineering.com)

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Position: Research Associate  
Company: E Source  
Web Site: [www.esource.com](http://www.esource.com)  
Main Phone: 303-444-7788  
Fax: 303.484.4279  
Address: 1965 North 57th Court  
Boulder, CO 80301

Contact Email: [jobs@esource.com](mailto:jobs@esource.com)

## **More Info:**

E Source has an immediate entry-level opening for a Research Associate in its Technology Assessment Group. The role of the research associate is to assist colleagues in preparing information products and services on the general topic of energy end-use technologies. Such technologies may include, but not be limited to: lighting, air conditioning, motors, building-scale generation, renewables, and load management. This work will consist largely of collecting published materials, conducting interviews, analyzing data, organizing information, developing actionable recommendations, and writing short articles. The ideal candidate will be able to demonstrate a high level of proficiency in these skills: communication (especially writing and public speaking), critical thinking, understanding of energy markets and energy end-use technologies, and the ability to explain how technologies work to a general interest audience.

## **Qualifications:**

College degree in engineering or physics or significant work experience evaluating, designing, or analyzing energy consuming end use equipment; graduate degree a plus  
Strong research skills, including ability to use Internet to conduct research  
Strong writing skills  
Strong communication skills





# EMPLOYMENT LISTINGS



Strong interpersonal skills  
Some public speaking experience  
Computer skills, including word processing, spreadsheet, and presentation applications

**Salary:** \$35,000-\$45,000

Please send cover letter, resume, and at least one writing sample to [jobs@esource.com](mailto:jobs@esource.com). Enter "Tech RA application" in the subject line.

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Position(s): Preconstruction Manager  
Company: U.S. Engineering Company  
Web Site: [www.usengineering.com](http://www.usengineering.com)  
Main Phone: 303-964-8060  
Fax: 303-964-8063  
Address: 729 S.E. 8<sup>th</sup> St  
Loveland, CO 80537

Contact: Dan Strait  
Contact Phone: 303-964-8060  
Contact Email: [dstrait@usengineering.com](mailto:dstrait@usengineering.com)

More Info:

## **Preconstruction Manager**

U.S. Engineering Company is seeking to hire a preconstruction manager for a permanent position in the Colorado Region. U.S. Engineering Company is one of Colorado's leading mechanical contractors providing high quality piping, plumbing, and sheetmetal services. Desired candidates shall have previous experience in preconstruction services or a minimum of 4 years experience in the design of HVAC and plumbing systems. P.E. preferred but not required. Position includes but not limited to: budget management, conceptual & schematic level systems design of plumbing, piping, & HVAC systems; conceptual estimating and value engineering; proposal preparation and presentation. Candidate must have good communication skills. Salary & benefits competitive. If interested, please contact Dan Strait 303-964-8060. U.S. Engineering Company is an equal opportunity employer. Visit our website at [www.usengineering.com](http://www.usengineering.com)

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Position(s): HVAC Project Engineer  
Company: M-E Engineers, Inc.  
Web Site: [www.me-engineers.com](http://www.me-engineers.com)  
Main Phone: 303.421.6655  
Fax: 303.421.0331  
Address: 10055 W. 43<sup>rd</sup> Avenue  
Wheat Ridge, CO 80033





# EMPLOYMENT LISTINGS



Contact: Trish Lavato  
Contact Phone: 303.421.6655  
Contact Email: [tlovato@me-engineers.com](mailto:tlovato@me-engineers.com)

## More Info:

M-E Engineers, Inc. is an international engineering firm seeking Mechanical Engineers to work on sports facilities, laboratories, health care and commercial projects. Preferred candidates should have 3+ years experience in the design of HVAC systems. These positions require strong technical abilities, organizational skills and attitude. PE preferred. Excellent salary and benefit package. Send resumes to: M-E Engineers, Inc. Attn: Trish Lovato or e-mail [tlovato@me-engineers.com](mailto:tlovato@me-engineers.com).

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Position: Design Engineer  
Company: Integrated Mechanical, LLC  
Main Phone: 970-556-0570  
Fax: Toll free 800-656-4359  
Address: 2601 S. Lemay #7-421  
Fort Collins, CO 80525

Contact: Thomas Segelhorst  
Contact Phone: 970-556-0570  
Contact Email: [integrated-mech@comcast.net](mailto:integrated-mech@comcast.net)

## More Info:

Qualified candidates shall have a BS Degree in Mechanical Engineering with a minimum 3 years of experience in HVAC/Plumbing design. Work history MUST include design of HVAC and plumbing systems for commercial buildings. Residential design experience may also be helpful. Working knowledge of AutoCAD is necessary. This position will include project management, engineering design, supervising system installation, and assisting other engineers in job completion. Integrated Mechanical is a privately-owned design firm that strives for the highest quality service possible. We offer a stable working environment for our employees.





# MEMBERSHIP PROMOTION



Welcome to September's edition of "The Membership Promotion Page." Please take a close look at the chapter's roster located at [www.rockymtnashrae.com](http://www.rockymtnashrae.com) for the following:

1. If you are a member of ASHRAE (student, associate, member, etc.) your name should be included within the roster.
2. If you have requested that your contact address be your residential address, I have only included your name and the city and state of your residence.
3. If you have requested that your contact address be your business address, I have included your name, the business name and mailing address, and your email address.
4. If a "0" appears where your email address should be, ASHRAE does not have an email address for you assuming your contact address is your business address.
5. Your name appears in the same format ASHRAE has it recorded. I have not attempted to add "Dr", "PE", "PhD" or other pertinent information that ASHRAE does not have.
6. If any of your information is incorrect, or if you want changes made to your information, please send an email to [larry@acemechanical.com](mailto:larry@acemechanical.com) and I will make the requested changes.
7. If you have been omitted from this list and want to know why, please send an email to [larry@acemechanical.com](mailto:larry@acemechanical.com) and I will research why ASHRAE is not including you. Common reasons for omission include human error and unpaid ASHRAE membership dues.

I hope everyone spends the holiday season surrounded by your closest friends and family.





NAME: \_\_\_\_\_  
 (LAST) (FIRST) (MI)

STATUS: RENEWAL\_\_\_\_ NEW MEMBER\_\_\_\_ ADDRESS CHANGE\_\_\_\_

PLEASE CIRCLE PREFERRED MAILING ADDRESS:

HOME ADDRESS & PHONE

BUSINESS NAME, ADDRESS & PHONE

\_\_\_\_\_  
 \_\_\_\_\_

\_\_\_\_\_  
 \_\_\_\_\_

p: \_\_\_\_\_

p: \_\_\_\_\_

Preferred email address: \_\_\_\_\_

Society Membership No.: \_\_\_\_\_

Name Tag (\$10.00) PAID? Y N

Name to appear on name tag as: \_\_\_\_\_

I WOULD LIKE TO BE CONTACTED ABOUT SERVING ON ONE OF THE FOLLOWING COMMITTEES OR FUNCTIONS (PLEASE CIRCLE).

- A. NEWSLETTER
- B. MEMBERSHIP
- C. MEETING ATTENDANCE
- D. EDUCATION
- E. GOLF
- F. CHAPTER HISTORIAN
- G. TECHNICAL SEMINARS

- H. RESEARCH FUND PROMOTIONS
- I. MONTHLY MEETING PROGRAMS
- J. PUBLICITY
- K. SPOUSE'S NIGHT / SOCIAL COMMITTEE
- L. COLORADO ENGINEERING COUNCIL
- M. GENERAL (COMMITTEE HELP)
- N. ENERGY COMMITTEE

PLEASE MAIL THIS INVOICE AND YOUR CHECK FOR \$35.00 + \$10.00 (PAYABLE TO ROCKY MOUNTAIN CHAPTER ASHRAE) TO THE ADDRESS BELOW. SOCIETY WILL INVOICE YOU FOR BOTH SOCIETY AND LOCAL DUES EVERY YEAR FOLLOWING THIS FIRST YEAR:

Larry Hodgins, 13271 Holly St #F, Thornton CO 80241

membership@rockymtnashrae.org



## FIRST CLASS

Chapter may not act for Society. Expressions,  
opinions, and comments within this newsletter should  
not be taken as those of the Chapter or Society.

Rocky Mountain Chapter of ASHRAE  
c/o Ken Urbanek, E.I.T.  
MKK Consulting Engineers, Inc.  
7600 East Orchard Road  
Greenwood Village, CO 80111-2518



## ACTIVITIES CALENDAR



For membership info or change of address contact: Larry Hodgins • Empire Gas • [lhodgins@empiregas.com](mailto:lhodgins@empiregas.com)

September 6, 2006    Rocky Mountain ASHRAE Chapter Meeting - Commercial  
Closed Loop Ground Source Heat Pump Systems:  
What Every Mechanical Engineer Should Know!

October 4, 2006        Rocky Mountain ASHRAE Chapter Meeting Topic T.B.D.

November 14, 2006    ASHRAE Satellite Conference - Multiple Benefits Solutions  
for Enhanced Building Security

Visit the new Rocky Mountain ASHRAE website:

[www.rockymtnashrae.com](http://www.rockymtnashrae.com)



NEWSLETTER OF THE ROCKY MOUNTAIN CHAPTER  
AMERICAN SOCIETY OF HEATING, REFRIGERATING, AND AIR-CONDITIONING ENGINEERS, INC.

Volume 48, Number 2

OCTOBER 2006

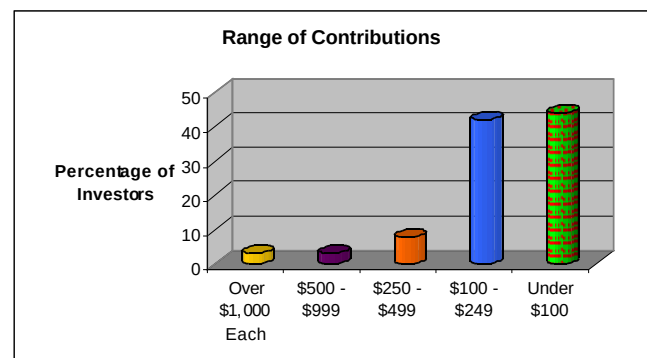
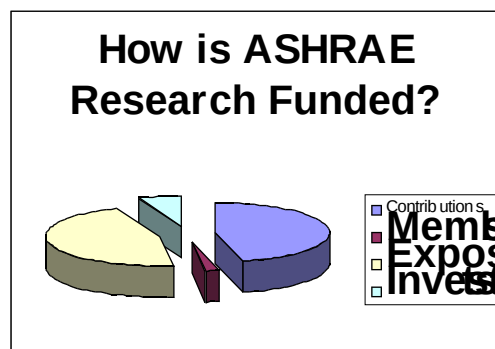
Editor: Ken Urbanek

## RESEARCH PROMOTION

As you may have noticed, we are leading off the Chapter Newsletter with a look at ASHRAE Research to emphasize its importance.

Information on the Dinner Program is on the following page.

Here is a quick look at ASHRAE Research:



Our Chapter goal, given to us by Society: to raise **\$34,263.00.**

That's \$52.07 per member of our chapter.

44% of investors to ASHRAE Research contribute less than \$100.

Nearly half of Funding for ASHRAE Research comes from Individual Investors.

Please consider donating what you can.

ASHRAE RESEARCH needs your support to continue *"to advance the arts and sciences of HVACR"* and continue improving the areas of Thermal Comfort, IAQ, Statistical Data, and Sustainability to name a few.

***Join us this month for  
Resource Promotion Month***





# OCTOBER MEETING



**Date:** October 4, 2006

**Cost:** Rocky Mtn Chapter Members-\$25\*  
\*With Reservations Made Before Monday Noon

**Dinner Location:** Wynkoop Brewing Company  
1634 18th St.  
Denver, CO 80202  
(Downtown, Corner of 18<sup>th</sup> & Wynkoop)

**Guests, Non-members or Without Reservation - \$30**  
**Students - \$20**

**RSVP: Justin Dunkin** justind@cfmcompany.com

**Time:** 5:30 Social Hour (Wynkoop)  
6:30 Dinner (Wynkoop)  
7:00 Program Begins (Wynkoop)

## **HYDRONIC RADIANT CEILINGS**

*Ceiling Heating and Cooling - May Not Be Over Your Head*

*MICHAEL P. O'ROURKE*  
*RADIANT ADVANTAGE LLC, Denver CO*

This presentation will cover design of radiant panel systems. Mike's presentation will cover how radiant heating and cooling work. He will then discuss specific systems such as hydronic radiant panels and radiant sails. He will review the economics and LEED impact of panel systems including DOE information about radiant panels. Examples of how panels fit in a project and what they look like will illustrate how these components come into play for a complete system. How radiant panels are installed will complete the presentation.

Mike O'Rourke has been involved in HVAC industry since 1984. He is a member of ASHRAE and is a member and current chairperson of TC 6.5 Radiant Panel Technical Committee (Chair 2006-2008) and is a member and past chairperson of TC 6.1 Steam and Hydronics Technical Committee (Chair 2000-2002). Mike is also a Certified Nuclear Plant Engineer. He spent 13 years in the nuclear industry after receiving his Bachelor of Science Degree from United States Naval Academy.

Scott Martin, PE  
Vice President - Programs  
Rocky Mountain Chapter of ASHRAE





# ROCKY MOUNTAIN ROSTER



President .....Kevin Parrot .....KevinP@trinity-mechanical.com

President Elect .....Brian Lynch.....blynch@bigassfans.com

Vice President .....Scott Martin .....smartin@rmhgroup.com

Secretary .....Jeremy Hollands .....jhollands@catorruma.com

Treasurer .....Justin Dunkin .....justind@cfmcompany.com

Newsletter Editor .....Ken Urbanek.....kurbanek@mkkeng.com

Membership .....Larry Hodgins .....larry@acemechanical.com

Refrigeration .....Dave Rodenberg.....drodenberg@long.com

Historian .....T.B.D.....

Technology Transfer .....Ken Urbanek.....kurbanek@mkkeng.com

Resource Promotions .....Brian Lynch.....blynch@bigassfans.com

Web Master .....Kyle Manske.....kmanske@comfortsystemsusa.com

Education Chairman .....Kevin Ainsworth .....kainsworth@mcgrath-inc.com

Director .....Mark Jelinske.....mjelinske@catorruma.com

Director .....Kevin Ainsworth .....kainsworth@mcgrath-inc.com

Past President .....John Stumpf .....john.stumpf@york.com





# PRESIDENT'S MESSAGE



Dear Rocky Mountain ASHRAE:

We had an outstanding turnout for our first meeting of the 2006/07 Rocky Mountain ASHRAE year. We had seventy plus people there to greet old friends and meet new ones. The raffle was the largest for our chapter in recent history. I can't recall a time that the raffle generated over \$200 in one night. Please check get with Brian Lynch for past sponsor information and future sponsorship opportunities.

Thank you to Terry Proffer for his talk on Geo-thermal design. His talk tied in well with ASHRAE's new position statement - 'ASHRAE will use its position as a recognized global leader in HVAC&R technologies and applications to develop and disseminate technical information, standards, educational programs and research on issues of social importance to promote building sustainability.' Look for presentation topics centered around this topic throughout the year and for literature and satellite broadcasts from the national organization.

Brian Lynch is already working hard and is energized to raise money for research. He is working on new ideas to not only raise money but to help spread our presence to the membership to the north. During our last board meeting we discussed the possibilities of a second golf tournament in the northern part of the state and Brian and Scott Martin are working to hold at least one northern area meeting, most likely a lunch meeting. If you have ideas or would like to get involved please contact anyone on the board.

On another thread our chapter is currently looking for someone to take over the historian position. This is a low key, low time commitment way to get involved with ASRAE on a local level. If you are interested or would like more details please contact me.

Hope to see everyone at this month's meeting when we discuss radiant panels, their uses and ramifications.

Thank you,  
Kevin Parrot  
President, Rocky Mountain Chapter ASHRAE  
[kevinp@trinity-mechanical.com](mailto:kevinp@trinity-mechanical.com)





## The Latest in Technical, Energy, and Government Activities

### New Research from ASHRAE: Lower Temperatures, Increased Ventilation Boost Student Performance

ATLANTA Along with pencils and paper, increased ventilation is a fundamental necessity for students returning to the classroom this fall, according to research from the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE).

Research shows that kids learn better in schools with better air quality. An article describing the research is featured in the October issue of the ASHRAE Journal. The research was funded by ASHRAE and conducted in Denmark. A final report is due later in the year.

The research indicates that lowering the temperature and increasing ventilation in classrooms increases student performance by 10 to 20 percent. The students' performance improved mainly in terms of how quickly they worked and also how many errors were made.

For more information please refer to the ASHRAE website at [www.ashrae.org](http://www.ashrae.org).

### Podcasts of ASHRAE Seminars



For the first time, ASHRAE is offering Podcasts of selected seminar presentations. Presented at the Quebec City meeting, these individual Podcasts are short (about 20 min.), timely, practical, insightful and will help you keep abreast of activities in HVAC system selection, commissioning, underfloor systems and ASHRAE Standard 62.1, *Ventilation for Acceptable Indoor Air Quality*. Gain insight into these timely topics as well as what it's like to attend an ASHRAE meeting. For more information please refer to the ASHRAE website at [www.ashrae.org](http://www.ashrae.org).

### ASHRAE Satellite Broadcasts Confirmed for the Fall of 06' and the Spring 07'

Tuesday, November 14, 2006 has been confirmed for the "Multiple Benefit Solutions for Enhanced Building Security" Satellite Broadcast/Webcast. ASHRAE Presidential Ad Hoc Homeland Security Committee sponsors this free program.

Thursday, April 19, 2007, has been confirmed for the Chapter Technology Transfer Committee free Satellite Broadcast/Webcast. This free program will focus on "Indoor Air Quality."

If you have any questions regarding Technical, Energy, and Government Activities with respect to ASHRAE please contact local Chapter Technology Transfer Committee Chair Ken Urbanek via e-mail at [kurbanek@mkkeng.com](mailto:kurbanek@mkkeng.com).



# MEMBERSHIP PROMOTION



Welcome to September's edition of "The Membership Promotion Page." Please take a close look at the chapter's roster located at [www.rockymtnashrae.com](http://www.rockymtnashrae.com) for the following:

1. If you are a member of ASHRAE (student, associate, member, etc.) your name should be included within the roster.
2. If you have requested that your contact address be your residential address, I have only included your name and the city and state of your residence.
3. If you have requested that your contact address be your business address, I have included your name, the business name and mailing address, and your email address.
4. If a "0" appears where your email address should be, ASHRAE does not have an email address for you assuming your contact address is your business address.
5. Your name appears in the same format ASHRAE has it recorded. I have not attempted to add "Dr", "PE", "PhD" or other pertinent information that ASHRAE does not have.
6. If any of your information is incorrect, or if you want changes made to your information, please send an email to [larry@acemechanical.com](mailto:larry@acemechanical.com) and I will make the requested changes.
7. If you have been omitted from this list and want to know why, please send an email to [larry@acemechanical.com](mailto:larry@acemechanical.com) and I will research why ASHRAE is not including you. Common reasons for omission include human error and unpaid ASHRAE membership dues.

I hope everyone spends the holiday season surrounded by your closest friends and family.





Name: \_\_\_\_\_  
 (Last) (First) (MI)

Status: Renewal \_\_\_\_\_ New Member \_\_\_\_\_ Address Change \_\_\_\_\_

Please circle preferred mailing address:  
 Home Address and Phone

Business Name, Address and Phone

\_\_\_\_\_  
 \_\_\_\_\_

\_\_\_\_\_  
 \_\_\_\_\_

p: \_\_\_\_\_

p: \_\_\_\_\_

Preferred email address: \_\_\_\_\_

Society Membership Number / Grade: \_\_\_\_\_

Name Tag (\$10.00) Paid? Y N

Name to appear on name tag as: \_\_\_\_\_

I would like to be contacted about serving on one of the following committees or functions (Please circle):

- |                       |                                      |
|-----------------------|--------------------------------------|
| A. Newsletter         | H. Research Fund Promotions          |
| B. Membership         | I. Monthly Meeting Programs          |
| C. Meeting Attendance | J. Publicity                         |
| D. Education          | K. Spouse's Night / Social Committee |
| E. Golf               | L. Colorado Engineering Council      |
| F. Chapter Historian  | M. General (Committee Help)          |
| G. Technical Seminars | N. Energy Committee                  |

Please mail this invoice and your check for \$50.00 (2006 / 2007 year) + \$10.00 payable to **Rocky Mountain Chapter ASHRAE** to the address listed below. ASHRAE will invoice you for both society and local dues every year following the first year.

Mr. Lawrence J. Hodgins, PE  
 Rocky Mountain Chapter ASHRAE Membership Promotion Chair  
 13271 Holly Street #F, Thornton CO 80241  
[membership@rockymtnashrae.com](mailto:membership@rockymtnashrae.com) or [larry@acemechanical.com](mailto:larry@acemechanical.com)







# ANNOUNCEMENTS



The Rocky Mountain Chapter will be hosting the Regional ASHRAE Conference for 4 days in August of 2008. This conference is where chapters in our Region IX get together to discuss chapter business operations. The chapter will be forming committees and needs volunteers for Finance, Events, Entertainment, Publicity, Reception and Registration, Transportation, Golf, Technical Sessions and more. If you are interested in helping out please contact John Stumpf (email [john.stumpf@york.com](mailto:john.stumpf@york.com) / phone 303-904-7928)

## PLAN TO BE THERE!

The 5th Annual

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- Keynote luncheon speaker: Clarence "Cal" Marsella, General Manager, RTD - Fas Tracks
- Plus door prizes, free latte, free beer tasting each afternoon

**BE SURE YOU SAVE THESE DATES!**

Wednesday – November 8th  
Thursday – November 9th, 2006

Reach a quality audience with information on your products and services.



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**RESERVE YOUR EXHIBIT BOOTH SPACE TODAY!**

## AIHA-RMS/ASSE 12 Annual OEH&S Conference 2006 ANNUAL CALIBRATION REQUIRED

October 17-18, 2006

**Arvada Center for the Performing Arts • 6901 Wadsworth Blvd. Arvada, Colorado**

This year's edition of the annual fall conference will feature half-day workshops including emergency response, control banding/global harmonization, accident prevention and exposure/risk assessment methods; an environmental, health and safety (EHS) management roundtable; and floor presentations on a variety of industrial hygiene and safety subjects such as nanotechnology, toxicology, improving reports and data presentations, pandemic response, and more! In addition, there will be a vendor area on Day 1 featuring an evening social event (yes that means free food!) and an AED demonstration.

Details available on the AIHA-RMS website at <http://www.aiha-rms.org>







# EMPLOYMENT LISTINGS



Position: Mechanical/Energy Engineer, Electrical Engineer  
Company: PCD Engineering Services, Inc.  
Web Site: [www.pcdengineering.com](http://www.pcdengineering.com)  
Main Phone: 303-678-1108 Fax: 303-678-1142  
Address: 184 Wetterhorn Way, Longmont, CO 80501  
Contact: Peter D'Antonio  
Contact Phone: 303-678-1108  
Contact Email: [peter@pcdengineering.com](mailto:peter@pcdengineering.com)

**PCD Engineering Services, Inc.** is a firm focused on the client and the environment offering sustainable mechanical/electrical design engineering, energy management, and integrated building system solutions.

Interested in working in a growing engineering firm? Interested in being a part of challenging, innovative projects? We are seeking talented individuals ready to contribute to a dynamic and fun working environment.

## Mechanical Engineer

Successful candidate will have 3+ years experience in the design of HVAC and plumbing systems. Candidate will be working on a wide variety of project types including new construction and facility renovations. Experience in energy efficient design and analysis, building energy modeling and sustainable design a plus. Please submit resume and salary history to [peter@pcdengineering.com](mailto:peter@pcdengineering.com)

## Electrical Engineer

Successful candidate will have current P.E. license in electrical discipline and will be working out of our Longmont, Colorado office location. Candidate will be working on a wide variety of project types including new construction and facility renovations. Candidate shall have experience in building power, lighting and fire alarm systems design. Experience in energy efficient design and analysis, LEED projects, and sustainable design a plus. Please submit resume and salary history to [peter@pcdengineering.com](mailto:peter@pcdengineering.com)

=====  
Position(s): Mechanical Design Engineer, Electrical Design Engineer  
Company: Colorado State University  
Web Site: <http://jobs.colostate.edu/> (State Classified/Staff Employment List all jobs)  
Main Phone: (970) 491-0087 Fax: (970) 491-6116  
Address: 251 Edison Drive, Fort Collins, CO 80523  
Contact: Michael Randall  
Contact Phone: (970) 491-0087  
Contact Email: [mrandall@users.fm.colostate.edu](mailto:mrandall@users.fm.colostate.edu)

More Info: Colorado State University is located in Northern Colorado at the base of the Rocky Mountains. CSU is the largest employer in Fort Collins. The positions are assigned to Facilities Management and will provide analysis, design, and technical support for maintenance projects and programs. Engineering positions also assist colleges, departments and Colorado State University clients with all aspects of Mechanical/Electrical Engineering needs, designs, and consultations.





# EMPLOYMENT LISTINGS



Position(s) : HVAC Controls and Building Automation - Application Engineer  
HVAC Controls and Building Automation - AutoCAD/Graphics Designer

Company: Setpoint Systems Corporation  
Web Site: [www.setpointsystems.com](http://www.setpointsystems.com)  
Main Phone: 303-733-2300  
Fax: 303-733-2333  
Address: 8167 SouthPark Circle  
Littleton, CO. 80120

Contact: Alan Hill  
Contact Phone: 303-733-2300  
Contact Email: [ahill@setpointsystems.com](mailto:ahill@setpointsystems.com)

## More Info:

Setpoint Systems Corporation, incorporated in 1983, is one of the largest independent building automation/facility systems integrators in the Rocky Mountain area. Setpoint is an award winning temperature controls contractor, based in Denver, Colorado, serving Colorado, New Mexico, and Wyoming. We are the number one distributor of Delta Controls automation systems in the United States. Setpoint designs, installs and services complete building management, monitoring and information driven systems. From the boiler room-to-the-board room Setpoint integrates various building control systems with dissimilar manufacturers and with management information systems. Setpoint provides a common and open architecture that delivers consistent temperature controls, card access, lighting, energy management, security, CCTV and fire alarm systems capabilities for each facility or institutional structure.

Setpoint Systems Corporation offers a complete benefits/health package, including 401K contribution matching and tuition reimbursement. EOE M/F/D/V.

## Applications Engineer:

Due to our rapid growth, we are in search of Engineers to design control systems for HVAC applications. Position requires experience with AutoCAD; working knowledge of DDC, electric and pneumatic control systems for commercial, industrial and institutional buildings; and excellent analytical and organizational skills. Additionally, experience with CCTV, access control, and fire alarm systems would be ideal. Extensive product training provided by employer. Salary commensurate with experience.

## AutoCAD/Graphics Designer:

Due to our rapid growth, we are in search of AutoCAD/Graphics Designers to prepare engineering drawings and graphics for HVAC control applications. Position requires experience with AutoCAD and graphics design for DDC, electric and pneumatic control systems for commercial, industrial, and institutional buildings. Additionally, experience with CCTV, access control, and/or fire alarm systems would be ideal. Extensive product training provided by employer. Salary commensurate with experience.





# EMPLOYMENT LISTINGS



Position(s): Mechanical Engineer P.E. & Electrical Engineer P.E.  
Company: Shaffer Baucom Engineering & Consulting  
Web Site: sbengr.com  
Main Phone: 303.986.8200  
Fax: 303.986.8222  
Address: 7333 W. Jefferson Ave., Suite 230 Lakewood, CO 80235

Contact: Ellie Dugle  
Contact Phone: 303.986.8200  
Contact Email: edugle@sbengr.com

## More Info:

Shaffer Baucom Engineering & Consulting is a mechanical & electrical consulting firm in Lakewood, CO. Principals of the firm have served owners/clients in the Denver area for over 25 years. The ideal candidate would have a minimum of 7 years experience as a consulting engineer. PE license is required. We have an excellent benefit package. We offer a very competitive salary and bonus program. Please send your resume and references to Ellie Dugle at the above mailing or email address.

=====  
Position: Project Design Engineer  
Company: Design Mechanical  
Web Site: www.comfortsystemsusa.com  
Main Phone: 303-449-2092  
Fax: 303-449-8739  
Address: 168 CTC Blvd, Suite D  
Louisville, CO 80027

Contact: Rich Benge  
Contact Phone: 303-661-1720  
Contact Email: rbenge@comfortsystemsusa.com

## More Info:

Design Mechanical is a full service design/build mechanical contractor with in-house design services that support our construction efforts. Our main office is in Louisville with satellite offices in Eagle and Telluride Colorado. We are seeking an experienced project design engineer to work in our Louisville engineering department. The ideal candidate would have a minimum 5 years of experience in designing commercial HVAC and plumbing systems within a design/build environment. Hydronic system design experience required. PE license is a plus but not a requirement. Design team leadership skills are a plus. Excellent benefit package. Salary commensurate with experience. Please send resume and references to Rich Benge at the above mailing or email address.





# EMPLOYMENT LISTINGS



Company: EMC Engineers, Inc.  
Web Site: [www.emcengineers.com](http://www.emcengineers.com)  
Main Phone: 303-974-1200  
Fax: 303-974-1239  
Address: 143 Union Blvd, Suite 350  
Lakewood, CO 80228  
Contact: Don Davenport  
Contact Phone: 303-974-1219  
Contact Email: [ddavenport@emcengineers.com](mailto:ddavenport@emcengineers.com) (for all positions below)

## **HVAC Engineering Opportunities**

EMC Engineers is a national organization, specializing in energy analysis, assessments, sustainable design, commissioning and retro-commissioning of HVAC and control systems in buildings. Our staff specializes in HVAC, Controls and Lighting systems in buildings including evaluating, analyzing, testing, designing and implementing improvements in building mechanical and electrical systems to reduce energy consumption, improve the interior environment, and enhance building operations. We have been performing these services for 30 years on a national and international scale.

Our clients include institutional, government, commercial, healthcare, and K12 markets as well as numerous utility sector clients. Our work is varied and provides exceptional opportunities to solve new problems in new and existing buildings with each project we undertake. You will find our work challenging, rewarding and technically advanced.

Growth opportunities exist in our Denver Headquarters office for the following HVAC engineering positions:

### **Senior HVAC Project Manager:**

Successful candidate must demonstrate ability to lead work and manage core service projects and project staff. Position requires minimum BSME in Mechanical or HVAC Engineering, registered Professional Engineer, with 10 to 20 years experience in:

- Assessment and evaluation of HVAC systems in multiple building types
- Knowledge of HVAC control systems and optimizing building HVAC operations
- Strong analytical capability in energy analysis and energy use in building HVAC and lighting systems
- Experience in building systems audits, commissioning and retro-commissioning
- Ability to lead and mentor project technical staff
- Strong client and internal communication skills
- Proven ability to develop project plans and manage projects to successful schedule, budget and technical outcomes
- Ability to develop new business opportunities and projects in our core business delivery technical service areas with internal marketing support
- Experience with design of HVAC and particularly high performance buildings a definite plus, include LEED AP certification

Continued Next Page





# EMPLOYMENT LISTINGS



Successful candidate should have a strong background in the inspection, construction, operations, and/or design of building HVAC systems and building automation systems. Knowledge of electrical systems, fire protection, fire alarm, and other MEP systems a plus. Strong computer skills a must. Will consider possible relocation assistance for the right candidate.

## Staff HVAC Engineers

Position requires motivated Mechanical or HVAC engineers to join our team. Minimum requirements are BSME in Mechanical, HVAC, or Architectural Engineering, registration as Professional Engineer highly desirable, and 4 to 10 years of experience in:

- Assessment and evaluation of HVAC systems in buildings
- Knowledge of HVAC controls and building HVAC operations
- Analytical energy analysis capability including energy simulation modeling
- Experience in building systems audits, commissioning or retro-commissioning a plus
- Solid communication skills
- Desire to develop project plans and manage assigned projects
- Experience with design of HVAC systems and high performance buildings a definite plus, include LEED AP certification

Candidates must possess good contractor relationship skills, “hands on” operations interest, including HVAC and Control systems testing. Technical interest and focus in HVAC and control systems troubleshooting, assessment, audits, testing, programming, commissioning and retro-commissioning are expected.

## Position Responses:

For the positions open above, please respond noting specifically which position you are applying for (include cover letter and resume) to the contact listed.

=====

Position(s): HVAC Project Engineer  
Company: M-E Engineers, Inc.  
Web Site: [www.me-engineers.com](http://www.me-engineers.com)  
Main Phone: 303.421.6655  
Fax: 303.421.0331  
Address: 10055 W. 43<sup>rd</sup> Avenue  
Wheat Ridge, CO 80033  
Contact: Trish Lavato  
Contact Phone: 303.421.6655  
Contact Email: [tlovato@me-engineers.com](mailto:tlovato@me-engineers.com)

## More Info:

M-E Engineers, Inc. is an international engineering firm seeking Mechanical Engineers to work on sports facilities, laboratories, health care and commercial projects. Preferred candidates should have 3+ years experience in the design of HVAC systems. These positions require strong technical abilities, organizational skills and attitude. PE preferred. Excellent salary and benefit package. Send resumes to: M-E Engineers, Inc. Attn: Trish Lovato or e-mail [tlovato@me-engineers.com](mailto:tlovato@me-engineers.com).



## FIRST CLASS

Chapter may not act for Society. Expressions,  
opinions, and comments within this newsletter should  
not be taken as those of the Chapter or Society.

Rocky Mountain Chapter of ASHRAE  
c/o Ken Urbanek, E.I.T.  
MKK Consulting Engineers, Inc.  
7600 East Orchard Road  
Greenwood Village, CO 80111-2518



## ACTIVITIES CALENDAR



For membership info or change of address contact: Larry Hodgins • Ace Mechanical • [larry@acemechanical.com](mailto:larry@acemechanical.com)

**October 4, 2006**

Rocky Mountain ASHRAE Chapter Meeting - HYDRONIC  
RADIANT CEILINGS: Ceiling Heating and Cooling - May  
Not Be Over Your Head

**November 1, 2006**

Rocky Mountain ASHRAE Chapter Meeting Topic T.B.D.

**November 14, 2006**

ASHRAE Satellite Conference - Multiple Benefits Solutions for  
Enhanced Building Security

**February 2, 2007**

Rocky Mountain ASHRAE - D.U. Hockey Night

Visit the new Rocky Mountain ASHRAE website:

[www.rockymtnashrae.com](http://www.rockymtnashrae.com)



NEWSLETTER OF THE ROCKY MOUNTAIN CHAPTER  
AMERICAN SOCIETY OF HEATING, REFRIGERATING, AND AIR-CONDITIONING ENGINEERS, INC.

Volume 48, Number 3

NOVEMBER 2006

Editor: Ken Urbanek



## NOVEMBER MEETING



**Date:** November 1, 2006

**Cost:** Rocky Mtn Chapter Members-\$25\*  
\*With Reservations Made Before Monday Noon

**Dinner:** Colorado Sheet Metal Training Institute  
**Location:** 1515 West 47<sup>th</sup> Avenue  
Denver, CO 80211  
(47<sup>th</sup> and Pecos just south of I-70)

Guests, Non-members or Without Reservation - \$30  
Students - \$20

**Time:** 5:30 Social Hour  
6:30 Dinner & Program

**RSVP:** Justin Dunkin  
E-mail: justind@cfmcompany.com



## RESEARCH PROMOTION



Drink beer and save the world. Please join us this month at Oktoberfest, a German twist to ASHRAE. We'll be getting together to have a little fun and raise a little dough for ASHRAE Research at the Stone House in Lakewood. Festivities start at 3:00 on Friday, October 27<sup>th</sup>. Further details of the event are in this newsletter.

A special thanks goes out to York Johnson Controls for sponsoring last month's (October) Research Raffle and Big Ass Fans for sponsoring the September prize. To date over \$200 has been raised by our monthly raffle. Our November meeting prize will be sponsored by Cator Ruma & Associates.

ASHRAE Research benefits us all from keeping our beer cold to improving the air we breathe. To conduct this research, ASHRAE Society has given us a goal this year to raise \$34,263.00 (or \$52.00 per member). The Resource Promotion committee and the chapter Board of Governors will be in touch with each of you soon to seek your support.

Thank you,

Brian Lynch  
Resource Promotion, President Elect  
ASHRAE, Rocky Mountain Chapter





# NOVEMBER PROGRAM INFO



## SMACNA COLORADO/ROCKY MOUNTAIN ASHRAE MEETING

Wednesday, November 1, 2006  
Networking & Social Hour – 5:30 pm  
Dinner & Program – 6:30 pm

**SPEAKER:** Eli Howard, Executive Director, Technical Services,  
SMACNA National

**“What Every Contractor and Engineer Should  
Know About The New “HVAC Duct Construction  
Standards – Metal & Flexible, 3<sup>rd</sup> Ed.”**

**Colorado Sheet Metal Apprenticeship Training Institute  
1515 W. 47<sup>th</sup> Avenue, Denver, CO 80211**

**\$25 per person**

**\$30 at the Door**

*Social Hour hosted by  
Colorado Sheet Metal Apprenticeship Training Institute*

**REGISTRATION DEADLINE: Friday, October 27, 2006  
Questions? (303) 832-4224**

### RESERVATION FORM

|                   |               |
|-------------------|---------------|
| Company _____     | Contact _____ |
| Phone _____       | FAX _____     |
| Attendee(s) _____ |               |
| _____             |               |
| _____             |               |

Total Enclosed: @ \$25 each = \$.

Send to: SMACNA Colorado, 1114 W. 7<sup>th</sup> Avenue  
#220, Denver, CO 80204 FAX (303) 832-5116





# ROCKY MOUNTAIN ROSTER



President .....Kevin Parrot .....KevinP@trinity-mechanical.com

President Elect .....Brian Lynch.....blynch@bigassfans.com

Vice President .....Scott Martin .....smartin@rmhgroup.com

Secretary .....Jeremy Hollands .....jhollands@catorruma.com

Treasurer .....Justin Dunkin .....justind@cfmcompany.com

Newsletter Editor .....Ken Urbanek.....kurbanek@mkkeng.com

Membership .....Larry Hodgins .....larry@acemechanical.com

Refrigeration .....Dave Rodenberg.....drodenberg@long.com

Historian .....Adam Bishop.....adamb@cfmcompany.com

Technology Transfer .....Ken Urbanek.....kurbanek@mkkeng.com

Resource Promotions .....Brian Lynch.....blynch@bigassfans.com

Web Master .....Kyle Manske.....kmanske@comfortsystemsusa.com

Education Chairman .....Kevin Ainsworth .....kainsworth@mcgrath-inc.com

Director .....Mark Jelinske.....mjelinske@catorruma.com

Director .....Kevin Ainsworth .....kainsworth@mcgrath-inc.com

Past President .....John Stumpf .....john.stumpf@york.com





# PRESIDENT'S MESSAGE



Dear Rocky Mountain ASHRAE:

Thanks to Michael O'Rourke for his informative presentation on radiant heating and cooling. I think he dispelled some of the common myths. I think everyone at the meeting learned something new or was able to reinforce the things that they already knew. I have noticed lots of new and old faces at the meetings this year. Thank you to all of the members that continue to come and welcome to the new and returning members.

I am excited about this month's joint meeting with SMACNA. We always have a great turn out and it is nice to change up the routine a bit. Please don't forget we are meeting at SMACNA's facility at 47<sup>th</sup> and Pecos just south of I-70. Try and bring a friend or co worker to the meeting. I would love to make a good showing with our friends at SMACNA.

On a happy note, three of our long time members have reached new distinctions.

Santo A Abbate - Life Member

Jere C Hamilton - Life Member

Louis D Sorrentino - Fifty-year Member

With that said, now would be a good time to contact Larry Hodgins about possibly upgrading your membership from associate member to member if you are eligible. Larry can give you the details.

ASHRAE National has released a few announcements lately (some strange but true):

- The ASHRAE Journal is now available on line at [ASHRAE.org](http://ASHRAE.org).
- Applications are currently being accepted for our Engineering, Regional, and University-specific Scholarships for the 2007-2008 academic year and must be postmarked by December 1, 2006
- We have a few free passes to the USGBC conference. Please contact me via email ([kevinp@Trinity-Mechanical.com](mailto:kevinp@Trinity-Mechanical.com)) if you are interested.
- International building codes may soon incorporate new requirements from ASHRAE standards, thanks to several recent proposals now under consideration. See [ASHRAE.org](http://ASHRAE.org) for more information.
- The hottest new rap video can't be seen on MTV, BET or even VH-1 it's on [ASHRAE.org](http://ASHRAE.org). That's right "rap video." Not something you would think that the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) had the 4-11 about, right?

Hope to see everyone at this month's joint meeting with SMACNA.

Thank you,

Kevin Parrot

President, Rocky Mountain Chapter ASHRAE

[kevinp@trinity-mechanical.com](mailto:kevinp@trinity-mechanical.com)





# STUDENT NIGHT INFORMATION



## Rocky Mountain ASHRAE Student Night

November is Student Night and students from area universities will be in attendance. We will award up to four \$1000 scholarships to those deserving students. We are in need of sponsors for Student Night and we will contact local members to be sponsors. This entails spending the evening with the students telling them about ASHRAE and our industry.

Kevin L. Ainsworth, P.E.

Education Chairman & Director, Rocky Mountain Chapter ASHRAE

Phone: 303.969.0220

E-mail: [kainsworth@mcgrath-inc.com](mailto:kainsworth@mcgrath-inc.com)



## NOVEMBER SECRETARY'S REPORT



Each month the Rocky Mountain Chapter of ASHRAE's Board of Governor's meets to discuss important chapter issues. A few highlights will be listed in the newsletter to inform members of upcoming events, to request volunteers and inform members of current issues.

Skip Willenbrock passed last month, his efforts resulted in the successful tradition of our annual Golf Tournament. The Golf Tournament has been renamed in his honor and we will present a plaque of appreciation to his family.

Our Scholarship fund is now self-sustaining and will provide scholarships to students involved in chapters of ASHRAE for future generations at no cost to membership.

Last month was Research Promotion Month and we would like to thank all of our members who contributed during this drive.

Call for nominations-If you know someone who's contributions to ASHRAE have improved our society, we encourage you to nominate them for a lifetime achievement award.

We have filled the position of Historian, Adam who has managed our Scholarship Fund for years has volunteered to act as chapter Historian. We thank him for his past hard work and appreciate his continued contributions.

The annual Chapter Regional Chairs meeting will be held in Denver in 2008. We have started preparations for this and will be looking for volunteers in the future.

Thanks,

Jeremy Hollands, P.E.

Secretary, Rocky Mountain Chapter ASHRAE

[JHollands@catorruma.com](mailto:JHollands@catorruma.com)





## The Latest in Technical, Energy, and Government Activities



### ASHRAE Looks to Develop Water Conservation Standard

ASHRAE Requirements regarding the amount of water used to operate HVAC, plumbing and irrigation systems would be established under a proposed standard from the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE).

"Water is the most important renewable resource on this planet," Terry Townsend, P.E., ASHRAE president, said. "To protect this source of life, we must reduce the demand and consumption that the built environment is placing on available water sources. It is our intention to develop a standard that can be used globally to conserve this valuable resource."

The proposed standard, Conservation of Water Use in Building, Site and Mechanical Systems, would provide baseline requirements for the design of buildings, landscapes, and mechanical systems that minimize the volume of water required to operate HVAC systems, plumbing systems, and irrigation systems.

The standard would address water use efficiency through water conservation measures implemented during design and construction of residential, commercial, institutional and industrial projects. It would not apply to storm water management.

The proposed title, purpose and scope of the standard are open for public comment until Nov. 20. Also, members are being sought to serve on a committee to write the standard.

For more information please refer to the ASHRAE website at [www.ashrae.org](http://www.ashrae.org).

If you have any questions regarding Technical, Energy, and Government Activities with respect to ASHRAE please contact local Chapter Technology Transfer Committee Chair Ken Urbanek via e-mail at [kurbanek@mkkeng.com](mailto:kurbanek@mkkeng.com).



### Free ASHRAE Satellite Broadcast/Webcast

#### "Multiple Benefits Solutions for Enhanced Building Security"

November 14, 2006 11:00 A.M. 2:00 P.M. MDT

This broadcast will inform the audience of the many efforts that can be taken to reduce vulnerability to terrorist acts that also provide reduced vulnerability to natural and accidental incidents, and may provide improvements in reliability, safety, comfort,

energy use, and operating cost of the building and its systems. Some of these efforts may even reduce operating expenses sufficiently to allow recovery of the associated costs within a reasonable time frame and favorably impact insurance premiums. This **FREE** program is sponsored by ASHRAE's Building Safety and Security Special Committee with support from the Alfred P. Sloan Foundation. Visit <http://www.ashrae.org/homelandsecuritybroadcast2> for complete details.



## How to Participate

You may host a Satellite Broadcast/Webcast for your colleagues, you may register to view the Satellite Broadcast/Webcast at a local site (see below), or you may register to [view the Webcast on you PC](#).

## Local Broadcast/Webcast Site Hosted By Local ASHRAE Sponsor's

### I. **MKK Consulting Engineers, Inc.** 7600 East Orchard Rd. Suite 250S, Greenwood Village, CO (Webcast Site)

As seating is limited please RSVP to Ken Urbanek at [kurbanek@mkkeng.com](mailto:kurbanek@mkkeng.com) by November 10, 2006. Participants of Local Broadcast Sites are also encouraged to register online.

## Broadcast Topics

### I. **Panel 1 Brief Presentations and Panel Discussion**

Principles of risk management and how they can allow treatment of health, safety, and security issues that extend beyond those normally considered in current practice, codes and standards.

Panelists: George Glavis, P. E. U. S. Department of State; D. Scott Fisher, P.E. State Farm Insurance Company; James Woods, Ph.D., P.E. The Building Diagnostics Research Institute, Inc.; Richard Bielen, P. E. National Fire Protection Association; Ronald Vallort, P. E. Ron Vallort and Associates, Ltd.

### II. **Panel 2 Brief Presentations and Panel Discussion**

The application and integration of architectural and engineering principles and practices to achieve the levels of acceptable risks and benefits as defined by the Risk Management approach.

Panelists: Stuart Knoop, FAIA Oudens + Knoop Architects, P. C.; Andrew Persily, Ph.D. National Institute of Standards and Technology; William Coad, P. E. Coad Engineering Enterprises  
Patrick Spahn, P. E.; Lawrence Spielvogel, P. E. Consulting Engineer

## New National ASHRAE Membership Discount

Non-member participants will be given a \$50 discount for applying for national ASHRAE membership. A special membership application will be available at satellite broadcast sites or by request at [membership@ashrao.org](mailto:membership@ashrao.org).

## Registration

Online registration for Satellite Broadcast Site Coordinators and Webcast Participants will begin October 2, 2006, at <http://www.ashrae.org/homelandsecuritybroadcast2>. There is no fee for registration. If you have any questions contact local Chapter Technology Transfer Committee Chair Ken Urbanek via e-mail at [kurbanek@mkkeng.com](mailto:kurbanek@mkkeng.com) or call at 303-796-6000.







# NATIONAL ASHRAE SCHOLARSHIP PROGRAM



The ASHRAE Scholarship Program is designed to encourage and assist in the education of men and women pursuing a career in the field of heating, ventilating, air conditioning and refrigeration (HVAC&R) through its granting of scholarships and fellowships. The program also serves the public interest by aiding in the education of men and women to become qualified to practice as engineers in the HVAC&R field.

For more information and scholarship applications please visit the ASHRAE website at <http://www.ashrae.org>



## MEMBERSHIP PROMOTION



Welcome to November's edition of "The Membership Promotion Page." Please take a close look at the chapter's roster located at [www.rockymtnashrae.com](http://www.rockymtnashrae.com) for the following:

1. If you are a member of ASHRAE (student, associate, member, etc.) your name should be included within the roster.
2. If you have requested that your contact address be your residential address, I have only included your name and the city and state of your residence.
3. If you have requested that your contact address be your business address, I have included your name, the business name and mailing address, and your email address.
4. If a "0" appears where your email address should be, ASHRAE does not have an email address for you assuming your contact address is your business address.
5. Your name appears in the same format ASHRAE has it recorded. I have not attempted to add "Dr", "PE", "PhD" or other pertinent information that ASHRAE does not have.
6. If any of your information is incorrect, or if you want changes made to your information, please send an email to [larry@acemechanical.com](mailto:larry@acemechanical.com) and I will make the requested changes.
7. If you have been omitted from this list and want to know why, please send an email to [larry@acemechanical.com](mailto:larry@acemechanical.com) and I will research why ASHRAE is not including you. Common reasons for omission include human error and unpaid ASHRAE membership dues.

I hope everyone spends the holiday season surrounded by your closest friends and family.







Name: \_\_\_\_\_  
 (Last) (First) (MI)

Status: Renewal \_\_\_\_\_ New Member \_\_\_\_\_ Address Change \_\_\_\_\_

Please circle preferred mailing address:  
 Home Address and Phone

Business Name, Address and Phone

\_\_\_\_\_  
 \_\_\_\_\_

\_\_\_\_\_  
 \_\_\_\_\_

p: \_\_\_\_\_

p: \_\_\_\_\_

Preferred email address: \_\_\_\_\_

Society Membership Number / Grade: \_\_\_\_\_

Name Tag (\$10.00) Paid? Y N

Name to appear on name tag as: \_\_\_\_\_

I would like to be contacted about serving on one of the following committees or functions (Please circle):

- |                       |                                      |
|-----------------------|--------------------------------------|
| A. Newsletter         | H. Research Fund Promotions          |
| B. Membership         | I. Monthly Meeting Programs          |
| C. Meeting Attendance | J. Publicity                         |
| D. Education          | K. Spouse's Night / Social Committee |
| E. Golf               | L. Colorado Engineering Council      |
| F. Chapter Historian  | M. General (Committee Help)          |
| G. Technical Seminars | N. Energy Committee                  |

Please mail this invoice and your check for \$50.00 (2006 / 2007 year) + \$10.00 payable to **Rocky Mountain Chapter ASHRAE** to the address listed below. ASHRAE will invoice you for both society and local dues every year following the first year.

Mr. Lawrence J. Hodgins, PE  
 Rocky Mountain Chapter ASHRAE Membership Promotion Chair  
 13271 Holly Street #F, Thornton CO 80241  
[membership@rockymtnashrae.com](mailto:membership@rockymtnashrae.com) or [larry@acemechanical.com](mailto:larry@acemechanical.com)





## ANNOUNCEMENTS



The Rocky Mountain Chapter will be hosting the Regional ASHRAE Conference for 4 days in August of 2008. This conference is where chapters in our Region IX get together to discuss chapter business operations. The chapter will be forming committees and needs volunteers for Finance, Events, Entertainment, Publicity, Reception and Registration, Transportation, Golf, Technical Sessions and more. If you are interested in helping out please contact John Stumpf (email [john.stumpf@york.com](mailto:john.stumpf@york.com) / phone 303-904-7928)



## AFEC CONFERENCE



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MANAGEMENT & ENGINEERING  
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NOVEMBER 8 – 9, 2006

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Phone 303-771-2000, Fax 303-843-6232

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- Excellent networking opportunities.
- Informative exhibits and technical demonstrations.
- Keynote luncheon speaker: Clarence "Cal" Marsella, General Manager, RTD - Fas Tracks
- Plus door prizes, free latte, free beer tasting each afternoon

#### BE SURE YOU SAVE THESE DATES!

Wednesday – November 8th

Thursday – November 9th, 2006

Reach a quality audience with information on your products and services.

Sponsored by:



RESERVE YOUR EXHIBIT BOOTH SPACE TODAY!





# EMPLOYMENT LISTINGS



Position: Mechanical Engineer, Electrical Engineer  
Company: Summit MEP Consultants, Inc.  
Web site: [www.summitmep.com](http://www.summitmep.com)  
Phone: 303-904-9585  
Fax: 303-948-2269  
Address: 2750 S. Wadsworth Blvd., Suite D-202, Denver, CO 80227  
Contact: Michael McGraw, Vice President  
Email resume in strictest confidence to [mem@summitmep.com](mailto:mem@summitmep.com)

## Mechanical Engineer

Position requires motivated, degreed engineer with multiple talents including: client development, project management and design of HVAC, plumbing and fire protection. LEED AP certification is a plus. Hiring bonus offered for successful candidate or successful referral.

## Electrical Engineer

Position requires motivated, degreed engineer with multiple talents including: client development, project management and design of power, lighting and fire alarms. Hiring bonus offered for successful candidate or successful referral. PE certification is a plus.

=====  
Position(s): Design Engineer  
Company: Integrated Mechanical, LLC  
Main Phone: 970-556-0570  
Fax: Toll free 800-656-4359  
Address: 223 Linden Street, Suite 204  
Fort Collins, CO 80524

Contact: Thomas Segelhorst  
Contact Phone: 970-556-0570  
Contact Email: [integrated-mech@comcast.net](mailto:integrated-mech@comcast.net)

## More Info:

Qualified candidates shall have a BS Degree in Mechanical Engineering with a minimum 3 years of experience in HVAC/Plumbing design. Work history MUST include design of HVAC and plumbing systems for commercial buildings. Residential design experience may also be helpful. Working knowledge of AutoCAD is necessary. This position will include project management, engineering design, supervising system installation, and assisting other engineers in job completion. Integrated Mechanical is a privately-owned design firm that strives for the highest quality service possible. We offer a stable working environment for our employees.





# EMPLOYMENT LISTINGS



Position: Mechanical Engineer, Electrical Engineer, AutoCAD Designer/Drafter  
Company: Cator, Ruma & Associates  
Website: [www.catorruma.com](http://www.catorruma.com)  
Main Phone: 303-232-6200  
Fax: 303-233-3701  
Address: 1550 Dover St., Suite 2  
Lakewood, Co 80215  
Contact: send resumes to [cra-resumes@catorruma.com](mailto:cra-resumes@catorruma.com)

## More Information:

If you are interested in working on technically challenging HVAC, plumbing and fire-protection design projects, we are interested in discussing career opportunities with you. We are hiring MECHANICAL ENGINEERS and senior level designers with a minimum of 4 years experience in mechanical building systems design.

Cator, Ruma & Associates, an MEP firm, is seeking ELECTRICAL ENGINEERS and Designers with a minimum of 2 years experience. We need conscientious, responsible individuals who are well versed in electrical power, lighting, communications and building systems design for institutional and commercial buildings. Good written and verbal communication skills are essential for the position.

Cator, Ruma & Associates is seeking a 3 year experienced AUTOCAD DRAFTER/DESIGNER to join our firm. We need an individual who is knowledgeable in operating auto CAD to draft and design HVAC, electrical power and lighting systems for commercial/institutional buildings.

We can offer you an excellent compensation package including a competitive salary, paid major medical, including dental and vision, with flexible spending, 401K, disability and supplemental life, gym membership, generous paid holidays and vacation, flex time and Friday afternoons off. Fax resume to 303-233-3701, e-mail: [cra-resumes@catorruma.com](mailto:cra-resumes@catorruma.com), or visit our website at [www.catorruma.com](http://www.catorruma.com).

=====

Position(s): Mechanical Design Engineer, Electrical Design Engineer  
Company: Colorado State University  
Web Site: <http://jobs.colostate.edu/> (State Classified/Staff Employment List all jobs)  
Main Phone: (970) 491-0087  
Fax: (970) 491-6116  
Address: 251 Edison Drive, Fort Collins, CO 80523  
  
Contact: Michael Randall  
Contact Phone: (970) 491-0087  
Contact Email: [mrandall@users.fm.colostate.edu](mailto:mrandall@users.fm.colostate.edu)

More Info: Colorado State University is located in Northern Colorado at the base of the Rocky Mountains. CSU is the largest employer in Fort Collins. The positions are assigned to Facilities Management and will provide analysis, design, and technical support for maintenance projects and programs. Engineering positions also assist colleges, departments and Colorado State University clients with all aspects of Mechanical/Electrical Engineering needs, designs, and consultations.





# EMPLOYMENT LISTINGS



Position(s) : HVAC Controls and Building Automation - Application Engineer  
HVAC Controls and Building Automation - AutoCAD/Graphics Designer

Company: Setpoint Systems Corporation  
Web Site: [www.setpointsystems.com](http://www.setpointsystems.com)  
Main Phone: 303-733-2300  
Fax: 303-733-2333  
Address: 8167 SouthPark Circle  
Littleton, CO. 80120

Contact: Alan Hill  
Contact Phone: 303-733-2300  
Contact Email: [ahill@setpointsystems.com](mailto:ahill@setpointsystems.com)

## More Info:

Setpoint Systems Corporation, incorporated in 1983, is one of the largest independent building automation/facility systems integrators in the Rocky Mountain area. Setpoint is an award winning temperature controls contractor, based in Denver, Colorado, serving Colorado, New Mexico, and Wyoming. We are the number one distributor of Delta Controls automation systems in the United States. Setpoint designs, installs and services complete building management, monitoring and information driven systems. From the boiler room-to-the-board room Setpoint integrates various building control systems with dissimilar manufacturers and with management information systems. Setpoint provides a common and open architecture that delivers consistent temperature controls, card access, lighting, energy management, security, CCTV and fire alarm systems capabilities for each facility or institutional structure. Setpoint Systems Corporation offers a complete benefits/health package, including 401K contribution matching and tuition reimbursement. EOE M/F/D/V.

## Applications Engineer:

Due to our rapid growth, we are in search of Engineers to design control systems for HVAC applications. Position requires experience with AutoCAD; working knowledge of DDC, electric and pneumatic control systems for commercial, industrial and institutional buildings; and excellent analytical and organizational skills. Additionally, experience with CCTV, access control, and fire alarm systems would be ideal. Extensive product training provided by employer. Salary commensurate with experience.

## AutoCAD/Graphics Designer:

Due to our rapid growth, we are in search of AutoCAD/Graphics Designers to prepare engineering drawings and graphics for HVAC control applications. Position requires experience with AutoCAD and graphics design for DDC, electric and pneumatic control systems for commercial, industrial, and institutional buildings. Additionally, experience with CCTV, access control, and/or fire alarm systems would be ideal. Extensive product training provided by employer. Salary commensurate with experience.







# EMPLOYMENT LISTINGS



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Position(s): Mechanical Engineer P.E. & Electrical Engineer P.E.  
Company: Shaffer Baucom Engineering & Consulting  
Web Site: sbengr.com  
Main Phone: 303.986.8200  
Fax: 303.986.8222  
Address: 7333 W. Jefferson Ave., Suite 230 Lakewood, CO 80235

Contact: Ellie Dugle  
Contact Phone: 303.986.8200  
Contact Email: edugle@sbengr.com

## More Info:

Shaffer Baucom Engineering & Consulting is a mechanical & electrical consulting firm in Lakewood, CO. Principals of the firm have served owners/clients in the Denver area for over 25 years. The ideal candidate would have a minimum of 7 years experience as a consulting engineer. PE license is required. We have an excellent benefit package. We offer a very competitive salary and bonus program. Please send your resume and references to Ellie Dugle at the above mailing or email address.

=====



## FIRST CLASS

Chapter may not act for Society. Expressions, opinions, and comments within this newsletter should not be taken as those of the Chapter or Society.

Rocky Mountain Chapter of ASHRAE  
c/o Ken Urbanek, E.I.T.  
MKK Consulting Engineers, Inc.  
7600 East Orchard Road  
Greenwood Village, CO 80111-2518



## ACTIVITIES CALENDAR



For membership info or change of address contact: Larry Hodgins • Ace Mechanical • [larry@acemechanical.com](mailto:larry@acemechanical.com)

- |                   |                                                                                                                                                                                                                                                                                                                           |
|-------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| October 27, 2006  | Rocky Mountain ASHRAE Oktoberfest for Research Promotion-<br>Stone House in Lakewood                                                                                                                                                                                                                                      |
| November 1, 2006  | Rocky Mountain ASHRAE & SMACNA Colorado Joint Meeting (Student<br>Night) What Every Contractor and Engineer Should Know About<br>The New "HVAC Duct Construction Standards Metal & Flexible,<br>3 <sup>rd</sup> Ed." Colorado Sheet Metal Apprenticeship Training Institute,<br>1515 West 47 <sup>th</sup> Avenue, Denver |
| November 14, 2006 | ASHRAE Satellite Conference - Multiple Benefits Solutions for Enhanced<br>Building Security                                                                                                                                                                                                                               |
| December 6, 2006  | Rocky Mountain ASHRAE Chapter Meeting Topic T.B.D. - Wynkoop                                                                                                                                                                                                                                                              |
| February 2, 2007  | Rocky Mountain ASHRAE - D.U. Hockey Night                                                                                                                                                                                                                                                                                 |

Visit the new Rocky Mountain ASHRAE website:

[www.rockymtnashrae.com](http://www.rockymtnashrae.com)





NEWSLETTER OF THE ROCKY MOUNTAIN CHAPTER  
AMERICAN SOCIETY OF HEATING, REFRIGERATING, AND AIR-CONDITIONING ENGINEERS, INC.

Volume 48, Number 4

DECEMBER 2006

Editor: Ken Urbanek



## DECEMBER MEETING



**Date:** December 6, 2006

**Cost:** Rocky Mtn Chapter Members-\$25\*  
\*With Reservations Made Before Monday Noon

**Dinner Location:** Wynkoop Brewing Company  
1634 18th St.  
Denver, CO 80202  
(Downtown, Corner of 18<sup>th</sup> & Wynkoop)

Guests, Non-members or Without Reservation - \$30  
Students - \$20

**Time:** 5:30 Social Hour (Wynkoop)  
6:30 Dinner (Wynkoop)  
7:00 Program Begins (Wynkoop)

**RSVP: Justin Dunkin**  
E-mail: justind@cfmcompany.com



## RESEARCH PROMOTION



*"A hundred times a day I remind myself that my inner and outer life depend on the labors of others, living and dead, and that I must exert myself in order to give the same measure as I have received and am receiving." - Albert Einstein*

Having just celebrated the Thanksgiving Holiday, I found the quote above to be appropriate when addressing this month's newsletter article on ASHRAE Research and the benefits we receive from ASHRAE's work. To conduct this research, ASHRAE Society has given The Rocky Mountain Chapter **a goal this year to raise \$34,263.00 (or \$52.00 per member)**. The Resource Promotion committee and the chapter Board of Governors will be in touch with each of you soon to seek your support. Please strongly consider doing what you can to contribute.

Also in recent events, the **U.S. Green Building Council (USGBC)** recently held its annual **Greenbuild** Conference here in Denver to promote the ideas of Green Design and Sustainability. The following is from the **2005 2010 ASHRAE Research Strategic Plan**:



## ASHRAE Research Strategic Plan

The ASHRAE Research Strategic Plan centers on the concept of **Sustainability**. The world has finite resources, and so it is essential to effectively utilize those resources to accomplish the mission of ASHRAE. **Sustainability is the concept of maximizing the effectiveness of resource use while minimizing the impact of that use on the environment.** In terms of the thrust of ASHRAE activities, measures that reduce energy use should additionally minimize the negative impacts of carbon and other emissions, ozone depletion, noise, and other detrimental effects. The Research Plan that resulted from this consideration is based on five broad, far reaching **Research Opportunity Themes**:

- **Energy & Resources**
- **Indoor Environmental Quality**
- **Tools and Applications**
- **Equipment, Components, and Materials**
- **Education and Outreach**

In the coming months, we will look at each of these Research Themes and how they directly impact us locally.

Lastly, special thanks go out to **Cator Ruma & Associates** for sponsoring last month's (November) Research Raffle prize. They donated a 3 piece power tool set that obviously many people wanted, judging by the number of tickets sold.

December's meeting prize will be sponsored by **Ace Mechanical Equipment, Inc.** Tickets are \$5 for 3 chances or \$2 for 1 attempt.

Thank you,

Brian Lynch  
Resource Promotion, President Elect  
ASHRAE Rocky Mountain Chapter  
[blynch@bigassfans.com](mailto:blynch@bigassfans.com)





## Turning Hay into Heat: The Denver Zoo Goes Green

Zoological parks offer many opportunities to implement sustainable design strategies. A sustainable zoo campus can excite visitors to be more conservation-minded and to take action. We will look in detail at how the Denver Zoo has migrated to more sustainable operations and how that change has impacted everything from fundraising to design of its newest planned exhibit.

**1<sup>st</sup> Speaker: Jim Bradburn, P.E., LEED-AP**

**Topic: Implementing a LEED Campus Project: Unique Engineering Challenges for Sustainable Zoos**

When the Denver Zoo embarked on planning and design for Asian Tropics, the institution wanted the project to incorporate sustainable strategies. Sustainable engineering for animal environments presents unique challenges, among them very high rates of ventilation and significant water use. Solutions to these challenges were developed as part of the sustainable design process for the Asian Tropics exhibit. The design team analyzed both passive and active HVAC strategies for the multi-building campus and considered on-site renewable energy options. One strategy that was tested and is being implemented is a small-scale gasification system that takes advantage of the campus waste stream to create both heat and electrical power. Water use issues are being addressed with a municipally supplied reclaimed water system for non-potable applications.

**2<sup>nd</sup> Speaker: George Pond, ASLA**

**Topic: Growing Up Green: Coming to Terms with Sustainable Practices**

The greatest growing pains of going green are felt when trying to make an institution's operations sustainable. The challenge is to break institutional habits and build champions of change. Institutional change requires consideration of capital and operational costs, and we will share actual experiences with fundraising, capital investments, life cycle costs, and operational savings resulting from our conservation initiatives. The Denver Zoo has embarked on a mission to quantify the amount, make-up, and energy content of its waste flows to understand the zoo's impact on landfills and to discover opportunities to use the waste stream as a fuel source for energy production. Emerging gasification technologies now offer the ability to produce both electricity and heat on a small-scale, facility level. The opportunities, challenges, and processes to implement these technologies into the new Asian Tropics exhibit will be explored.

### **Biographies**

#### **Jim Bradburn, P.E., LEED-AP**

Jim Bradburn is the Sustainable Services Coordinator with The RMH Group in Lakewood, Colorado. His portfolio, earned over more than 10 years in the consulting field, reflects his interest in and knowledge of mechanical engineering for sustainable design. Jim earned his Bachelor of Science in mechanical technology from Purdue University and completed graduate coursework in architectural engineering. Jim is a registered professional engineer and LEED Accredited Professional.

#### **George Pond, ASLA**

George Pond is Vice President for the Planning & Capital Projects Department of the Denver Zoo, responsible for oversight and execution of the zoo's Millennium Master Plan. George has a Master of Architecture and a Master of Landscape Architecture, both from the University of Colorado at Denver, and a Bachelor of Arts in English from Kenyon College. He is on faculty at the College of Architecture and Planning at the University of Colorado at Denver as a senior instructor in landscape architecture.





# ROCKY MOUNTAIN ROSTER



President .....Kevin Parrot .....KevinP@trinity-mechanical.com

President Elect .....Brian Lynch.....blynch@bigassfans.com

Vice President.....Scott Martin .....smartin@rmhgroup.com

Secretary .....Jeremy Hollands .....jhollands@catorruma.com

Treasurer .....Justin Dunkin .....justind@cfmcompany.com

Newsletter Editor .....Ken Urbanek.....kurbanek@mkkeng.com

Membership .....Larry Hodgins .....larry@acemechanical.com

Refrigeration .....Dave Rodenberg.....drodenberg@long.com

Historian .....Adam Bishop.....adamb@cfmcompany.com

Technology Transfer .....Ken Urbanek.....kurbanek@mkkeng.com

Resource Promotions .....Brian Lynch.....blynch@bigassfans.com

Web Master .....Kyle Manske.....kmanske@comfortsystemsusa.com

Education Chairman .....Kevin Ainsworth .....kainsworth@mcgrath-inc.com

Director .....Mark Jelinske.....mjelinske@catorruma.com

Director .....Kevin Ainsworth .....kainsworth@mcgrath-inc.com

Past President .....John Stumpf .....john.stumpf@york.com





# PRESIDENT'S MESSAGE



Dear Rocky Mountain ASHRAE:

Happy Holidays to everyone. I hope everyone had a wonderful Thanksgiving and was able to enjoy it with family and friends.

The December meeting is dedicated to Past ASHRAE Presidents. We hope to recognize and say thank you some of the men and women who have given time and energy to the organization. We generally get a good turn out from people who don't necessarily come to that many monthly meetings anymore but who have left a lasting impression and made much of the organization what it is today. There are always some good stories told and it is a great time to learn about the chapter history and reminisce. The meeting will once again be at the Wynkoop so come out and buy a past president a drink and share a story.

At this meeting we will also officially dedicate and rename the Student Scholarship Fund 'The Skip Willenbrock Scholarship Award'. Some of Skip's family and friends will be there to accept a plaque and to help us acknowledge Skip for everything he did for ASHRAE. At last count the scholarship fund was up to over \$50,000 and is self sustaining for yearly awards. The fund has been many years in the making and we as an organization owe most of it's' success to Skip. I also want to thank Bill Mele for being the driving force to pull all of this together in Skip's name. Bill has been working behind the scenes for months now to keep Skip, his family and the ASHRAE community up to date.

Finally, as one of many reminders to come, the January meeting will be on the second Wednesday of the month as opposed to the first. Between the holidays and college football we know we can't compete so please join us on January 10<sup>th</sup> versus the 3<sup>rd</sup>.

Thank you,  
Kevin Parrot  
President, Rocky Mountain Chapter ASHRAE  
[kevinp@trinity-mechanical.com](mailto:kevinp@trinity-mechanical.com)





# DECEMBER SECRETARY'S REPORT



## November Chapter Meeting Review

Last month's joint meeting with SMACNA started with a social hour which would have overwhelmed the average citizen. Held at SMACNA's Denver NEBB Certified Training Facility, many Engineers found themselves wandering the enormous sheet metal shop in awe of the 6' brake, a plethora spot welders and most notable, the North wall full of every duct fitting some contractor had previously told me was a figment of my imagination. A special thanks to the SMACNA shop for providing a selection of wine, and an 8'x2' trough of bottle beer packed with ice to bring us back to the work tables where we could converse with colleges and contemplate how to fit this much metal working equipment into our garage.

This month's captivating speaker was Eli P. Howard of the SMACNA National Association. He explained how the SMACNA duct construction standards were developed through the use of both Finite Element Analysis and Physical Duct Specimen Testing. Reinforcements, joints, seals and structural members were not only modeled, but also physically blown apart to determine the pressure class ratings of construction. We learned how to use the reinforcement tables, and how contractors can vary duct gage and reinforcements to achieve specification requirements. The knowledge included in the presentation was complemented by an excellent reference handout and referrals to SMACNA publications and website, [www.smacna.org](http://www.smacna.org).

A special thanks to Susan Peet and Eli Howard for hosting this event.

Jeremy Hollands, P.E.  
Secretary, Rocky Mountain Chapter ASHRAE  
[jhollands@catorrumba.com](mailto:jhollands@catorrumba.com)



## NATIONAL ASHRAE SCHOLARSHIP PROGRAM



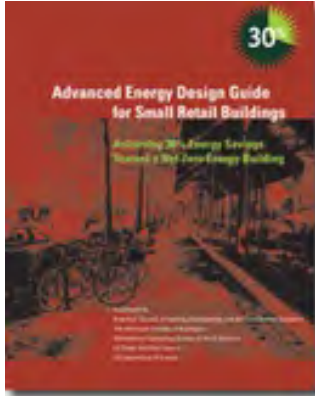
The ASHRAE Scholarship Program is designed to encourage and assist in the education of men and women pursuing a career in the field of heating, ventilating, air conditioning and refrigeration (HVAC&R) through its granting of scholarships and fellowships. The program also serves the public interest by aiding in the education of men and women to become qualified to practice as engineers in the HVAC&R field.

For more information and scholarship applications please visit the ASHRAE website at <http://www.ashrae.org>





## The Latest in Technical, Energy, and Government Activities



### Focus on Small Retail: ASHRAE Releases Next Advanced Energy Design Guide

ATLANTA Buildings designers are one step closer to a net-zero energy building.

Published by the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE), the Advanced Energy Design Guide for Small Retail Buildings is the second in a series of publications that cover various types of building construction. Intended for use by builders, contractors and architects, the guide covers energy-efficient design for retail buildings up to 20,000 square feet.

"The purpose of the design guide is to provide a simple, prescriptive menu of options that will result in a building using 30% less energy than those constructed in accordance with the 1999 version of ASHRAE Standard 90.1, the foundation for energy efficiency in building codes throughout the United States," said Merle McBride, chairman of the committee overseeing the book's creation. "Those looking to achieve a LEED certification from the U.S. Green Building Council (USGBC) will find this guide particularly useful."

The guide offers energy efficiency guidance in many areas, including lighting, HVAC efficiencies, windows, skylights and envelope measures. A major difference from Standard 90.1 is that the guide provides equipment efficiencies by climate zone to take into account varying environmental factors, instead of having one number for the entire United States.

The guide resulted from collaboration among ASHRAE, the Department of Energy, USGBC, Illuminating Engineering Society of North America (IESNA) and the American Institute of Architects (AIA). The retail industry provided guidance to the guide's development team to ensure building owner perspectives were considered when forming design recommendations. To help in future editions, users of the guide will be able to provide feedback via an Internet link.

The guide is part of a series of ASHRAE publications that will progress toward providing net-zero energy designs for buildings of various types. The first publication in the series focused on small office buildings, and the next energy design guide will address K-12 schools.

"This is a long-term endeavor by ASHRAE," said McBride. "ASHRAE is focusing on improving the energy efficiency of the nation's building stock, targeting where the greatest energysaving impact can be achieved."

For more information please refer to the ASHRAE website at [www.ashrae.org](http://www.ashrae.org).

If you have any questions regarding Technical, Energy, and Government Activities with respect to ASHRAE please contact local Chapter Technology Transfer Committee Chair Ken Urbanek via e-mail at [kurbanek@mkkeng.com](mailto:kurbanek@mkkeng.com).





# ANNOUNCEMENTS



The Rocky Mountain Chapter will be hosting the Regional ASHRAE Conference for 4 days in August of 2008. This conference is where chapters in our Region IX get together to discuss chapter business operations. The chapter will be forming committees and needs volunteers for Finance, Events, Entertainment, Publicity, Reception and Registration, Transportation, Golf, Technical Sessions and more. If you are interested in helping out please contact John Stumpf (email [john.stumpf@york.com](mailto:john.stumpf@york.com) / phone 303-904-7928)



# MEMBERSHIP PROMOTION



Welcome to December's edition of "The Membership Promotion Page." Please take a close look at the chapter's roster located at [www.rockymtnashrae.com](http://www.rockymtnashrae.com) for the following:

1. If you are a member of ASHRAE (student, associate, member, etc.) your name should be included within the roster.
2. If you have requested that your contact address be your residential address, I have only included your name and the city and state of your residence.
3. If you have requested that your contact address be your business address, I have included your name, the business name and mailing address, and your email address.
4. If a "0" appears where your email address should be, ASHRAE does not have an email address for you assuming your contact address is your business address.
5. Your name appears in the same format ASHRAE has it recorded. I have not attempted to add "Dr", "PE", "PhD" or other pertinent information that ASHRAE does not have.
6. If any of your information is incorrect, or if you want changes made to your information, please send an email to [larry@acemechanical.com](mailto:larry@acemechanical.com) and I will make the requested changes.
7. If you have been omitted from this list and want to know why, please send an email to [larry@acemechanical.com](mailto:larry@acemechanical.com) and I will research why ASHRAE is not including you. Common reasons for omission include human error and unpaid ASHRAE membership dues.

I hope everyone spends the holiday season surrounded by your closest friends and family





Name: \_\_\_\_\_  
 (Last) (First) (MI)

Status: Renewal \_\_\_\_\_ New Member \_\_\_\_\_ Address Change \_\_\_\_\_

Please circle preferred mailing address:  
 Home Address and Phone

Business Name, Address and Phone

\_\_\_\_\_  
 \_\_\_\_\_

\_\_\_\_\_  
 \_\_\_\_\_

p: \_\_\_\_\_

p: \_\_\_\_\_

Preferred email address: \_\_\_\_\_

Society Membership Number / Grade: \_\_\_\_\_

Name Tag (\$10.00) Paid? Y N

Name to appear on name tag as: \_\_\_\_\_

I would like to be contacted about serving on one of the following committees or functions (Please circle):

- |                       |                                      |
|-----------------------|--------------------------------------|
| A. Newsletter         | H. Research Fund Promotions          |
| B. Membership         | I. Monthly Meeting Programs          |
| C. Meeting Attendance | J. Publicity                         |
| D. Education          | K. Spouse's Night / Social Committee |
| E. Golf               | L. Colorado Engineering Council      |
| F. Chapter Historian  | M. General (Committee Help)          |
| G. Technical Seminars | N. Energy Committee                  |

Please mail this invoice and your check for \$50.00 (2006 / 2007 year) + \$10.00 payable to **Rocky Mountain Chapter ASHRAE** to the address listed below. ASHRAE will invoice you for both society and local dues every year following the first year.

Mr. Lawrence J. Hodgins, PE  
 Rocky Mountain Chapter ASHRAE Membership Promotion Chair  
 13271 Holly Street #F, Thornton CO 80241  
[membership@rockymtnashrae.com](mailto:membership@rockymtnashrae.com) or [larry@acemechanical.com](mailto:larry@acemechanical.com)





# EMPLOYMENT LISTINGS



Position(s): Mechanical Engineer P.E. & Electrical Engineer P.E.  
Company: Shaffer Baucom Engineering & Consulting  
Web Site: sbengr.com  
Main Phone: 303.986.8200  
Fax: 303.986.8222  
Address: 7333 W. Jefferson Ave., Suite 230 Lakewood, CO 80235

Contact: Ellie Dugle  
Contact Phone: 303.986.8200  
Contact Email: edugle@sbengr.com

## More Info:

Shaffer Baucom Engineering & Consulting is a mechanical & electrical consulting firm in Lakewood, CO. Principals of the firm have served owners/clients in the Denver area for over 25 years. The ideal candidate would have a minimum of 7 years experience as a consulting engineer. PE license is required. We have an excellent benefit package. We offer a very competitive salary and bonus program. Please send your resume and references to Ellie Dugle at the above mailing or email address.

=====

Position: Estimator  
Company: RK Mechanical, Inc.  
Main Phone: 303-355-9696  
Fax: 303-336-5820  
Address: 9300 E. Smith Road, Denver, CO 80126  
Contact: KC Ceranich  
Contact Phone: 303-355-9696  
Contact Email: kcceranich@rkmi.com

## More Info:

RK Mechanical, Inc. is Colorado's largest mechanical contractor. We've been around for over 40 years. We are the sub-contractor of choice for mechanical contracting for large commercial, medical, educational, governmental and industrial projects all over the state. Our growth over the past year has been incredible and it continues with no end in sight. We also have our own on site fabrication facility for all our duct and pipe work. Consider joining this dynamic quality organization as a Senior Estimator.

This individual would fit the following criteria at a minimum:

Minimum of 5 years estimating experience in the plumbing and/or hydronic piping field, or a combination of 2 years estimating and 5 years of field experience. Mechanical room experience is a definite plus.

- ..... Strong computer skills are required. Working knowledge of Excel, Word, Outlook, etc.
- ..... Estimating experience is a plus.





# EMPLOYMENT LISTINGS



- ..... Good knowledge of plumbing and/or hydronic piping systems.
- ..... Good to above average phone/people skills.
- ..... Able to read and interpret blue prints and specifications.
- ..... A certain degree of creativity and latitude.
- ..... A valid Colorado Drivers License.
- ..... Proactive and a team player.
- ..... Must be able to: multi-task, handle stress, meet deadlines, work in a professional environment
- ..... Communicate well with others (internal & external)
- ..... This is a full-time salary position with benefits.
- ..... Only hard workers and self motivated people will be considered
- ..... Average 45+ hours per week. Staying late and weekend work may be required to meet deadlines.

Send resume and salary requirements to [jobs@rkmi.com](mailto:jobs@rkmi.com) or fax 303-336-5820  
DFWEOE/m/f/d/v/s  
Reference: PPE092006 in subject line

=====

Position(s): Mechanical Engineer, Electrical Engineer  
Company: Summit MEP Consultants, Inc.  
Web site: [www.summitmep.com](http://www.summitmep.com)  
Phone: 303-904-9585  
Fax: 303-948-2269  
Address: 2750 S. Wadsworth Blvd., Suite D-202, Denver, CO 80227  
Contact: Michael McGraw, Vice President  
Email resume in strictest confidence to [mem@summitmep.com](mailto:mem@summitmep.com)

## Mechanical Engineer

Position requires motivated, degreed engineer with multiple talents including: client development, project management and design of HVAC, plumbing and fire protection. LEED AP certification is a plus. Hiring bonus offered for successful candidate or successful referral.

## Electrical Engineer

Position requires motivated, degreed engineer with multiple talents including: client development, project management and design of power, lighting and fire alarms. Hiring bonus offered for successful candidate or successful referral. PE certification is a plus.





# EMPLOYMENT LISTINGS



Position: Design Engineer  
Company: Integrated Mechanical, LLC  
Main Phone: 970-556-0570  
Fax: Toll free 800-656-4359  
Address: 223 Linden Street, Suite 204  
Fort Collins, CO 80524



Contact: Thomas Segelhorst  
Contact Phone: 970-556-0570  
Contact Email: [integrated-mech@comcast.net](mailto:integrated-mech@comcast.net)

## More Info:

Qualified candidates shall have a BS Degree in Mechanical Engineering with a minimum 3 years of experience in HVAC/Plumbing design. Work history **MUST** include design of HVAC and plumbing systems for commercial buildings. Residential design experience may also be helpful. Working knowledge of AutoCAD is necessary. This position will include project management, engineering design, supervising system installation, and assisting other engineers in job completion. Integrated Mechanical is a privately-owned design firm that strives for the highest quality service possible. We offer a stable working environment for our employees.

=====

Position(s): Mechanical Engineer, Electrical Engineer, AutoCAD Designer/Drafter  
Company: Cator, Ruma & Associates  
Website: [www.catorruma.com](http://www.catorruma.com)  
Main Phone: 303-232-6200  
Fax: 303-233-3701  
Address: 1550 Dover St., Suite 2  
Lakewood, Co 80215  
Contact: send resumes to [cra-resumes@catorruma.com](mailto:cra-resumes@catorruma.com)

## More Information:

If you are interested in working on technically challenging HVAC, plumbing and fire-protection design projects, we are interested in discussing career opportunities with you. We are hiring MECHANICAL ENGINEERS and senior level designers with a minimum of 4 years experience in mechanical building systems design.

Cator, Ruma & Associates, an MEP firm, is seeking ELECTRICAL ENGINEERS and Designers with a minimum of 2 years experience. We need conscientious, responsible individuals who are well versed in electrical power, lighting, communications and building systems design for institutional and commercial buildings. Good written and verbal communication skills are essential for the position.





# EMPLOYMENT LISTINGS



Cator, Ruma & Associates is seeking a 3 year experienced AUTOCAD DRAFTER/DESIGNER to join our firm. We need an individual who is knowledgeable in operating auto CAD to draft and design HVAC, electrical power and lighting systems for commercial/institutional buildings.

We can offer you an excellent compensation package including a competitive salary, paid major medical, including dental and vision, with flexible spending, 401K, disability and supplemental life, gym membership, generous paid holidays and vacation, flex time and Friday afternoons off. Fax resume to 303-233-3701, e-mail: [cra-resumes@catorruma.com](mailto:cra-resumes@catorruma.com), or visit our website at [www.catorruma.com](http://www.catorruma.com).

=====

Position(s): Mechanical Design Engineer, Electrical Design Engineer  
Company: Colorado State University  
Web Site: <http://jobs.colostate.edu/> (State Classified/Staff Employment List all jobs)  
Main Phone: (970) 491-0087  
Fax: (970) 491-6116  
Address: 251 Edison Drive, Fort Collins, CO 80523

Contact: Michael Randall  
Contact Phone: (970) 491-0087  
Contact Email: [mrandall@users.fm.colostate.edu](mailto:mrandall@users.fm.colostate.edu)

More Info: Colorado State University is located in Northern Colorado at the base of the Rocky Mountains. CSU is the largest employer in Fort Collins. The positions are assigned to Facilities Management and will provide analysis, design, and technical support for maintenance projects and programs. Engineering positions also assist colleges, departments and Colorado State University clients with all aspects of Mechanical/Electrical Engineering needs, designs, and consultations.





## FIRST CLASS

Chapter may not act for Society. Expressions, opinions, and comments within this newsletter should not be taken as those of the Chapter or Society.

Rocky Mountain Chapter of ASHRAE  
c/o Ken Urbanek, E.I.T.  
MKK Consulting Engineers, Inc.  
7600 East Orchard Road  
Greenwood Village, CO 80111-2518



## ACTIVITIES CALENDAR



For membership info or change of address contact: Larry Hodgins • Ace Mechanical • [larry@acemechanial.com](mailto:larry@acemechanial.com)

### ASHRAE Events

- |                  |                                                                                                                                |
|------------------|--------------------------------------------------------------------------------------------------------------------------------|
| December 6, 2006 | Rocky Mountain ASHRAE Chapter Meeting Past President's Night Topic: Turning Hay into Heat, The Denver Zoo Goes Green - Wynkoop |
| January 10, 2006 | Rocky Mountain ASHRAE Chapter Meeting Topic T.B.D. Wynkoop (Please note the date it is the SECOND WEDNESDAY of the month)      |
| February 2, 2007 | Rocky Mountain ASHRAE - D.U. Hockey Night                                                                                      |

Visit the new Rocky Mountain ASHRAE website:

[www.rockymtnashrae.com](http://www.rockymtnashrae.com)





NEWSLETTER OF THE ROCKY MOUNTAIN CHAPTER  
AMERICAN SOCIETY OF HEATING, REFRIGERATING, AND AIR-CONDITIONING ENGINEERS, INC.

Volume 48, Number 5

JANUARY 2007

Editor: Ken Urbanek



## DECEMBER MEETING



Visit the new Rocky Mountain ASHRAE website: [www.rockymtnashrae.com](http://www.rockymtnashrae.com)

**Date:** January 10, 2007

**Cost:** Rocky Mtn Chapter Members-\$25\*

\*With Reservations Made Before Monday Noon

**Dinner Location:** Wynkoop Brewing Company

1634 18th St.

Denver, CO 80202

(Downtown, Corner of 18<sup>th</sup> & Wynkoop)

Guests, Non-members or Without Reservation - \$30

Students - \$20

**RSVP:** Justin Dunkin

E-mail: [justind@cfmcompany.com](mailto:justind@cfmcompany.com)

**Time:** 5:30 Social Hour (Wynkoop)

6:30 Dinner (Wynkoop)

7:00 Program Begins (Wynkoop)



## RESEARCH PROMOTION



### Thank you Ace Mechanical Equipment and Air Purification Company

Special thanks go out to **Ace Mechanical Equipment** for sponsoring last month's (December) Research Raffle prize. They donated a \$50.00 gift card to The Home Depot. January's meeting prize, four tickets to the Avalanche vs. Coyotes hockey game, will be sponsored by **Air Purification Company**.

If your company is interested in sponsoring the Research Raffle, please contact Brian Lynch.

### ASHRAE Research at Work: ASHRAE Standards 90.1/90.2, 62.1/62.2 and 55

The mission of ASHRAE is *to advance the arts and sciences of heating, ventilating, air conditioning and refrigerating to serve humanity and promote a sustainable world*. Research is conducted to fulfill this mission by addressing:

- Comfort and Productivity
  - Quality of the Indoor and Outdoor Environment
  - Security, Safety, and Health
  - Cost Effectiveness



# RESEARCH PROMOTION



**The ASHRAE Research Strategic Plan centers on the concept of Sustainability.** One of the goals of this research is to optimize and make consistent **ASHRAE Standards 90, 62, and 55** to achieve measured and verified high system energy efficiency with high indoor environmental quality (IEQ for indoor built environments).

ASHRAE **Standard 90.1 & 90.2** cover energy standards, ASHRAE **Standard 62.1 & 62.2** cover ventilation for acceptable indoor air quality, and ASHRAE **Standard 55** covers the effects of air temperature, humidity, air movement, radiant temperature, clothing, and activity on human comfort. **Future monthly newsletters will further cover the contributions of ASHRAE Research toward these standards.**

ASHRAE Society has given us a goal this year to raise \$34,263.00 (or **\$52.00 per member**). Please see the Contribution form at the end of this newsletter to make a donation.

Thank you,

Brian Lynch  
Resource Promotion/President Elect  
ASHRAE Rocky Mountain Chapter  
[blynch@bigassfans.com](mailto:blynch@bigassfans.com)



# JANUARY PROGRAM INFO



## **Xcel Energy's Commercial and Industrial Energy Conservation Rebate Programs**

### **Topic**

This presentation will provide an overview of Xcel Energy's Commercial and Industrial Energy Conservation rebate programs. Xcel Energy currently offers rebate programs for lighting, cooling, motors, compressed air systems, building recommissioning, and new construction design assistance. In addition, Xcel Energy offers Custom Efficiency, which evaluates rebates for projects not covered by the other programs.

### **Biography**

#### **Bill Gruen**

Bill Gruen is the Colorado Trade Channel Manager for Xcel Energy's Commercial and Industrial Energy Conservation rebate programs. Prior to this position, Bill spent five years as the product manager for Xcel Energy's Colorado DSM Programs. Prior to joining Xcel Energy, Bill worked for a Boston-based energy service company for eight years. Bill has an undergraduate degree from George Washington University and a masters degree from Boston University.





# ROCKY MOUNTAIN ROSTER



President .....Kevin Parrot .....KevinP@trinity-mechanical.com

President Elect .....Brian Lynch.....blynch@bigassfans.com

Vice President .....Scott Martin .....smartin@rmhgroup.com

Secretary .....Jeremy Hollands .....jhollands@catorruma.com

Treasurer .....Justin Dunkin .....justind@cfmcompany.com

Newsletter Editor .....Ken Urbanek.....kurbanek@mkkeng.com

Membership .....Larry Hodgins .....larry@acemechanical.com

Refrigeration .....Dave Rodenberg.....drodenberg@long.com

Historian .....Adam Bishop.....adamb@cfmcompany.com

Technology Transfer .....Ken Urbanek.....kurbanek@mkkeng.com

Resource Promotions .....Brian Lynch.....blynch@bigassfans.com

Web Master .....Kyle Manske.....kmanske@comfortsystemsusa.com

Education Chairman .....Kevin Ainsworth .....kainsworth@mcgrath-inc.com

Director .....Mark Jelinske.....mjelinske@catorruma.com

Director .....Kevin Ainsworth .....kainsworth@mcgrath-inc.com

Past President .....John Stumpf .....john.stumpf@york.com





# PRESIDENT'S MESSAGE



Dear Rocky Mountain ASHRAE:

Happy New Year! Hope everyone had an enjoyable and safe holiday season. We look forward to a prosperous and healthy new year. I am assuming everyone has had their fill of college football and is ready for the second half of the ASHRAE year.

A number of events are coming up in the next few months and we could use some volunteers.

Engineers Week is February 18<sup>th</sup> - 24<sup>th</sup>. You can find out more information at <http://www.eweek.org/> or how you can help get students involved by contacting Ronnie Zimmerman at [rzimmerman@mkkeng.com](mailto:rzimmerman@mkkeng.com).

The tech conference committee will be having their first meeting on January 23<sup>rd</sup> at the York International/JCI office. Brian is excelling in his planning of the conference as always. Terry Townsend, Society President, will be our Keynote speaker at the Technical Conference this year! The theme will be 'Engineering for Sustainability'. If you are interested in helping or have speaker ideas please contact Brian Lynch. His contact information is listed on the website and on the BOG roster in the newsletter.

Lastly, Brian Lynch is working on setting up a Northern golf tournament in September to support scholarships and research promotions. He is just in the planning stages and I know he is looking for volunteers and site recommendations.

On a regional note, region IX has a new CTTC RVC (Regional vice chair). Dan Harmeyer with Engineering Consultants out of Albuquerque, NM has accepted the position.

Again, Happy New Year. See you at the meeting this Wednesday.

Thank you,  
Kevin Parrot  
President, Rocky Mountain Chapter ASHRAE  
[kevinp@trinity-mechanical.com](mailto:kevinp@trinity-mechanical.com)





# CRC ANNOUNCEMENT



## CRC 2008 Denver Colorado August 13<sup>th</sup> 18<sup>th</sup>

Good afternoon ASHRAE Members,

I have been asked to Chair the Convention of Regional Chairs (CRC) here in Denver and for those that have been involved in that process or have attended one of these events know that it takes a lot of effort of the local chapter to make this an enjoyable and successful event.

I am soliciting the general membership to ensure that everyone has an opportunity to participate. The kick off meeting for this will be the second or third week in January. Once I get responses of those interested I will send out a time and place where we will meet to move forward.

This commitment would require monthly meetings for approx an hour over lunch and as the event gets closer we would meet more frequently to ensure that all the details are covered.

Here are a few of the committees that are available so if you are interested in one over the other please inform me of your interest.

Banquet / Hotel Curtis Hotel is the location Banquet details needed  
Companions - Hospitality Room, Sightseeing events, transportation Ensuring that they have a place to meet and events to attend.  
Decorations Gift Baskets, Banners, etc.  
Entertainment Coordinate Events on and off site.  
Finance Budget reconciliation of income and expenses  
Publicity Mailers, Printing, Photography, Interviews, Special Invitations, and other publicity items  
Reception and Registration Welcoming Guest, Registration, Name badges, Pre-Registration, Meeting Venue and Identification Signs.  
Social- Presidents Luncheon, Banquets, Awards Functions, Employers Recognition breakfast  
Technical Programs-Technical Talks, Panel Forums, Technical Tours, - Coordinating these events and speakers.  
Transportation - Coordinate arrival of delegates and ensure adequate transportation is provided for all events.

Please respond via email to [john.d.stumpf@jci.com](mailto:john.d.stumpf@jci.com) for further details or to volunteer to make this the best CRC in decades.





## The Latest in Technical, Energy, and Government Activities



### Advanced Energy Design Guides

The ASHRAE Advanced Energy Design Guides (AEDG) are a series of publications designed to provide recommendations for achieving energy savings over the minimum code requirements of ANSI/ASHRAE/IESNA Standard 90.1-1999.

The initial series of guides have an energy savings target of 30% which is the first step in the process toward achieving a net zero energy building - defined as a building that, on an annual basis, draws from outside resources equal or less energy

than it provides using on-site renewable energy sources. Each 30% Guide addresses a specific building type. Additional guides for existing buildings and at 50% energy savings towards a net zero energy building are also planned.

ANSI/ASHRAE/IESNA Standard 90.1-1999, the energy conservation standard published at the turn of the millennium, provides the fixed reference point for all of the 30% Guides in this series. The primary reason for this choice as a reference point is to maintain a consistent baseline and scale for all of the 30% AEDG series documents.

The recommendations in the 30% Guides will allow those involved in designing or constructing the various building types to easily achieve advanced levels of energy savings without having to resort to detailed calculations or analyses. All of the energy saving recommendations for each of the eight U.S. climate zones are contained on a single page, thus facilitating the 30% Guide's use. Additional recommendations point out other opportunities to incorporate greater energy savings into the design of the building.

Completed Guides - Two 30% Guides have been completed so far:

- ☐ The ASHRAE Advanced Energy Design Guide for Small Office Buildings
- ☐ The ASHRAE Advanced Energy Design Guide for Small Retail Buildings

For more information please refer to the ASHRAE website at [www.ashrae.org](http://www.ashrae.org).

### ASHRAE Publishes User's Manual for Standard 62.2

ATLANTA A new book from ASHRAE will aid users in designing and constructing homes and apartments that comply with its residential ventilation and indoor air quality standard.

The User's Manual is the first for ASHRAE Standard 62.2-2004, *Ventilation and Acceptable Indoor Air Quality in Low-Rise Residential Buildings*, which provides the minimum requirements necessary to achieve acceptable indoor air quality for dwellings.

The manual explains how to comply with all the requirements of the standard, provides examples illustrating specific methods of complying with sections of the standard, and includes background material explaining why many of the requirements of the standard exist, according to Roger Hedrick, who co-authored the book.

The manual is targeted toward builders and subcontractors, but will also be useful for code officials, researchers, and interested homeowners.

For more information please refer to the ASHRAE website at [www.ashrae.org](http://www.ashrae.org).

If you have any questions regarding Technical, Energy, and Government Activities with respect to ASHRAE please contact local Chapter Technology Transfer Committee Chair Ken Urbanek via e-mail at [kurbanek@mkkeng.com](mailto:kurbanek@mkkeng.com).





# NATIONAL ASHRAE SCHOLARSHIP PROGRAM



The ASHRAE Scholarship Program is designed to encourage and assist in the education of men and women pursuing a career in the field of heating, ventilating, air conditioning and refrigeration (HVAC&R) through its granting of scholarships and fellowships. The program also serves the public interest by aiding in the education of men and women to become qualified to practice as engineers in the HVAC&R field.

For more information and scholarship applications please visit the ASHRAE website at <http://www.ashrae.org>



## MEMBERSHIP PROMOTION



Welcome to December's edition of "The Membership Promotion Page." Please take a close look at the chapter's roster located at [www.rockymtnashrae.com](http://www.rockymtnashrae.com) for the following:

1. If you are a member of ASHRAE (student, associate, member, etc.) your name should be included within the roster.
2. If you have requested that your contact address be your residential address, I have only included your name and the city and state of your residence.
3. If you have requested that your contact address be your business address, I have included your name, the business name and mailing address, and your email address.
4. If a "0" appears where your email address should be, ASHRAE does not have an email address for you assuming your contact address is your business address.
5. Your name appears in the same format ASHRAE has it recorded. I have not attempted to add "Dr", "PE", "PhD" or other pertinent information that ASHRAE does not have.
6. If any of your information is incorrect, or if you want changes made to your information, please send an email to [larry@acemechanical.com](mailto:larry@acemechanical.com) and I will make the requested changes.
7. If you have been omitted from this list and want to know why, please send an email to [larry@acemechanical.com](mailto:larry@acemechanical.com) and I will research why ASHRAE is not including you. Common reasons for omission include human error and unpaid ASHRAE membership dues.

I hope everyone spent the holiday season surrounded by your closest friends and family.







Name: \_\_\_\_\_  
(Last) (First) (MI)

Status: Renewal \_\_\_\_\_ New Member \_\_\_\_\_ Address Change \_\_\_\_\_

Please circle preferred mailing address:  
Home Address and Phone

Business Name, Address and Phone

---

---

p: \_\_\_\_\_

p: \_\_\_\_\_

Preferred email address: \_\_\_\_\_

Society Membership Number / Grade: \_\_\_\_\_

Name Tag (\$10.00) Paid?                      Y                      N

Name to appear on name tag as: \_\_\_\_\_

I would like to be contacted about serving on one of the following committees or functions (Please circle):

- A. Newsletter
- B. Membership
- C. Meeting Attendance
- D. Education
- E. Golf
- F. Chapter Historian
- G. Technical Seminars
- H. Research Fund Promotions
- I. Monthly Meeting Programs
- J. Publicity
- K. Spouse's Night / Social Committee
- L. Colorado Engineering Council
- M. General (Committee Help)
- N. Energy Committee

Please mail this invoice and your check for \$50.00 (2006 / 2007 year) + \$10.00 payable to **Rocky Mountain Chapter ASHRAE** to the address listed below. ASHRAE will invoice you for both society and local dues every year following the first year.

Mr. Lawrence J. Hodgins, PE  
Rocky Mountain Chapter ASHRAE Membership Promotion Chair  
13271 Holly Street #F, Thornton CO 80241  
[membership@rockymtnashrae.com](mailto:membership@rockymtnashrae.com) or [larry@acemechanical.com](mailto:larry@acemechanical.com)





# EMPLOYMENT LISTINGS



Position(s): HVAC / Refrigeration Service Technician

Company: Apex Wine Cellars  
Web Site: [www.apexwinecellars.com](http://www.apexwinecellars.com) , [www.cellartec.com](http://www.cellartec.com)  
Main Phone: (888) 999-9749  
Fax: (425) 486-5323  
Address: 15540 Woodinville Redmond Rd.  
Woodinville, WA 98072

Contact: Cam Nichols  
Contact Phone: (888) 999-9749 x 248  
Contact Email: [camn@groupapex.com](mailto:camn@groupapex.com)

More Info:

## **HVAC/REFRIGERATION SERVICE TECHNICIAN**

Apex Wine Cellars is the fastest growing manufacturer of custom designed wine cellar racking in the country. We have an immediate position available for a well qualified HVAC / Refrigeration Technician, holding current City and County of Denver Refrigeration Certificate for our local branch in Littleton, Colorado. This is a fantastic opportunity for the right person to establish themselves with an industry leading national company. The successful candidate must have advanced technical ability including refrigeration piping and controls wiring as well as good communication skills (verbal and written).

Work responsibilities to include installation and service of wine cellar refrigeration systems, ducting, humidifiers and control units.

Competitive compensation and benefit package.

Please e-mail resume including references and CO. D.L info to: [camn@groupapex.com](mailto:camn@groupapex.com).

=====

Position(s): HVAC Sales, inside (1) and outside (1)  
Company: Empire Gas & Electric Equipment  
Web Site: [www.empiregas.com](http://www.empiregas.com)  
Main Phone: 303.623.7747  
Fax: 303.623.5526  
Address: 4900 Osage St. #100; Denver, CO; 80221

Contact: Tom Garretson  
Contact Phone: 303.623.7747  
Contact Email: [tgarretson@empiregas.com](mailto:tgarretson@empiregas.com)

More Info:

Candidates should have a minimum of 3 years experience in the HVAC industry with an emphasis on commercial sales. Duties include application and pricing of commercial equipment; calling on specifying engineers, and





# EMPLOYMENT LISTINGS



assisting contractors on design-build projects. Inside sales will also prepare approval documents and administer sales orders. Outside sales will also work with contractors in areas of business development, sales/marketing and technical training. Both positions require strong communication skills. Send resume to 720-931-3496.

Empire Gas, founded in 1947, is a major distributor of HVAC equipment, controls and supplies in the Rocky Mountain region.

=====

Position(s): Sr. Facilities Engineer  
Company: Raytheon Polar Services Company  
Web Site: [www.rpsc.raytheon.com](http://www.rpsc.raytheon.com)  
Main Phone: 720-568-2094  
Fax: 303-662-8770  
Address: 7400 S. Tucson Way  
Centennial, CO 80112  
Contact: Miranda De Zwarte  
Contact Phone: 720-568-2094  
Contact Email: [Miranda.dezwarte@usap.gov](mailto:Miranda.dezwarte@usap.gov)

## More Info:

Seeking a unique adventure as well as employment? How would you like to be one of the few people on the planet to set foot on the 7<sup>th</sup> continent? Raytheon Polar Services is *the* primary contractor for the National Science Foundation's (NSF) U.S. Antarctic Program. We are seeking a full-time, **Sr. Facilities Engineer (TSC107435)** to work in our Centennial, CO office. This position will *deploy each austral summer (Oct. Feb.) to South Pole Station*.

The Sr. Facilities Engineer will be responsible for engineering investigations of facilities, equipment and operational issues; design, planning and executing small engineering projects as well as defining and budgeting large future maintenance projects for South Pole station in Antarctica. They will also be responsible for conducting facility assessments and code compliance and construction review.

Education: Bachelors Degree in facilities related Engineering discipline or similar field. Mechanical or Electrical Engineering degree preferred.

## Required Qualifications:

- Minimum eight years of increasing responsibility in facilities engineering design and maintenance with an emphasis in mechanical and electrical activities.
- Must be highly knowledgeable in building systems to include, HVAC, boilers, furnaces, hydronic heating systems, DDC and thermostatic controls and plumbing and electrical systems.





# EMPLOYMENT LISTINGS



## Desired Qualifications:

- Basic understanding of energy conservation and fire protection preferred
- Experience in system and project design, specification preparation and review, project scheduling, and project cost estimating is helpful.
- Experience in the development, implementation, and supervision of preventive maintenance and work control systems are highly desirable.
- Knowledge of water purification and power generation facilities is also preferred.
- Experience with/knowledge of chemical, civil and structural engineering preferred.
- Certifications by International Code Council (ICC) in inspection or plan review desirable.
- Professional Engineering registration is preferred.

To find out more about these and other open positions and to apply, please go to [www.RayJobs.com](http://www.RayJobs.com). Click on *Professional Recruiting* and that will get you into the site. If you are a first time user it will be necessary to register, create a profile and login. Once that is done, please search for and pull up the position by entering the corresponding TSC# listed above in the keyword search field click SEARCH. That will pull up that requisition and you can open it up and see a job description. To submit your resume to the position click on SUBMIT NOW in the upper right corner.

=====  
Position(s): Project Engineer  
Company: Trinity Mechanical, Inc.  
Main Phone: 303.442.3175  
Fax: 303.939.8017  
Address: 3095 Sterling Cir. West #3, Boulder, CO 80301

Contact: Kevin Parrot  
Contact Phone: 303.442.3175  
Contact Email: [Kevinp@Trinity-Mechanical.com](mailto:Kevinp@Trinity-Mechanical.com)

## More Info:

Trinity Mechanical is a Boulder based Design-Build mechanical contractor that performs commercial work along the Front Range. We are looking for a motivated individual to assist our team in all facets of construction from design, project management, estimating, and procurement. The right individual would have a BS in mechanical engineering or equivalent experience, be willing to learn, and be results oriented. Good communication both written and verbal and general computer skills a must. AutoCAD experience a plus.





# EMPLOYMENT LISTINGS



Position(s): Mechanical Engineer P.E. & Electrical Engineer P.E.  
Company: Shaffer Baucom Engineering & Consulting  
Web Site: sbengr.com  
Main Phone: 303.986.8200  
Fax: 303.986.8222  
Address: 7333 W. Jefferson Ave., Suite 230 Lakewood, CO 80235

Contact: Ellie Dugle  
Contact Phone: 303.986.8200  
Contact Email: edugle@sbengr.com

## More Info:

Shaffer Baucom Engineering & Consulting is a mechanical & electrical consulting firm in Lakewood, CO. Principals of the firm have served owners/clients in the Denver area for over 25 years. The ideal candidate would have a minimum of 7 years experience as a consulting engineer. PE license is required. We have an excellent benefit package. We offer a very competitive salary and bonus program. Please send your resume and references to Ellie Dugle at the above mailing or email address.

=====

Position: Estimator  
Company: RK Mechanical, Inc.  
Main Phone: 303-355-9696  
Fax: 303-336-5820  
Address: 9300 E. Smith Road, Denver, CO 80126  
Contact: KC Ceranich  
Contact Phone: 303-355-9696  
Contact Email: kcceranich@rkmi.com

## More Info:

RK Mechanical, Inc. is Colorado's largest mechanical contractor. We've been around for over 40 years. We are the sub-contractor of choice for mechanical contracting for large commercial, medical, educational, governmental and industrial projects all over the state. Our growth over the past year has been incredible and it continues with no end in sight. We also have our own on site fabrication facility for all our duct and pipe work. Consider joining this dynamic quality organization as a Senior Estimator.

This individual would fit the following criteria at a minimum:

Minimum of 5 years estimating experience in the plumbing and/or hydronic piping field, or a combination of 2 years estimating and 5 years of field experience. Mechanical room experience is a definite plus.

- ..... Strong computer skills are required. Working knowledge of Excel, Word, Outlook, etc.
- ..... Estimating experience is a plus.





# EMPLOYMENT LISTINGS



- ..... Good knowledge of plumbing and/or hydronic piping systems.
- ..... Good to above average phone/people skills.
- ..... Able to read and interpret blue prints and specifications.
- ..... A certain degree of creativity and latitude.
- ..... A valid Colorado Drivers License.
- ..... Proactive and a team player.
- ..... Must be able to:multi-task, handle stress, meet deadlines, work in a professional environment
- ..... Communicate well with others (internal & external)
- ..... This is a full-time salary position with benefits.
- ..... Only hard workers and self motivated people will be considered
- ..... Average 45+ hours per week. Staying late and weekend work may be required to meet deadlines.

Send resume and salary requirements to [jobs@rkmi.com](mailto:jobs@rkmi.com) or fax 303-336-5820  
DFWEOE/m/f/d/v/s  
Reference: PPE092006 in subject line

=====  
Position(s): Mechanical Engineer, Electrical Engineer  
Company: Summit MEP Consultants, Inc.  
Web site: [www.summitmep.com](http://www.summitmep.com)  
Phone: 303-904-9585  
Fax: 303-948-2269  
Address: 2750 S. Wadsworth Blvd., Suite D-202, Denver, CO 80227  
Contact: Michael McGraw, Vice President  
Email resume in strictest confidence to [mem@summitmep.com](mailto:mem@summitmep.com)

## Mechanical Engineer

Position requires motivated, degreed engineer with multiple talents including: client development, project management and design of HVAC, plumbing and fire protection. LEED AP certification is a plus. Hiring bonus offered for successful candidate or successful referral.

## Electrical Engineer

Position requires motivated, degreed engineer with multiple talents including: client development, project management and design of power, lighting and fire alarms. Hiring bonus offered for successful candidate or successful referral. PE certification is a plus.

=====  
Position: Design Engineer  
Company: Integrated Mechanical, LLC  
Main Phone: 970-556-0570  
Fax: Toll free 800-656-4359  
Address: 223 Linden Street, Suite 204  
Fort Collins, CO 80524  
  
Contact: Thomas Segelhorst  
Contact Phone: 970-556-0570  
Contact Email: [integrated-mech@comcast.net](mailto:integrated-mech@comcast.net)







# EMPLOYMENT LISTINGS



## More Info:

Qualified candidates shall have a BS Degree in Mechanical Engineering with a minimum 3 years of experience in HVAC/Plumbing design. Work history MUST include design of HVAC and plumbing systems for commercial buildings. Residential design experience may also be helpful. Working knowledge of AutoCAD is necessary. This position will include project management, engineering design, supervising system installation, and assisting other engineers in job completion. Integrated Mechanical is a privately-owned design firm that strives for the highest quality service possible. We offer a stable working environment for our employees.

=====  
Position(s): Mechanical Engineer, Electrical Engineer, AutoCAD Designer/Drafter  
Company: Cator, Ruma & Associates  
Website: [www.catorruma.com](http://www.catorruma.com)  
Main Phone: 303-232-6200  
Fax: 303-233-3701  
Address: 1550 Dover St., Suite 2  
Lakewood, Co 80215  
Contact: send resumes to [cra-resumes@catorruma.com](mailto:cra-resumes@catorruma.com)

## More Information:

If you are interested in working on technically challenging HVAC, plumbing and fire-protection design projects, we are interested in discussing career opportunities with you. We are hiring MECHANICAL ENGINEERS and senior level designers with a minimum of 4 years experience in mechanical building systems design.

Cator, Ruma & Associates, an MEP firm, is seeking ELECTRICAL ENGINEERS and Designers with a minimum of 2 years experience. We need conscientious, responsible individuals who are well versed in electrical power, lighting, communications and building systems design for institutional and commercial buildings. Good written and verbal communication skills are essential for the position.

Cator, Ruma & Associates is seeking a 3 year experienced AUTOCAD DRAFTER/DESIGNER to join our firm. We need an individual who is knowledgeable in operating auto CAD to draft and design HVAC, electrical power and lighting systems for commercial/institutional buildings.

We can offer you an excellent compensation package including a competitive salary, paid major medical, including dental and vision, with flexible spending, 401K, disability and supplemental life, gym membership, generous paid holidays and vacation, flex time and Friday afternoons off. Fax resume to 303-233-3701, e-mail: [cra-resumes@catorruma.com](mailto:cra-resumes@catorruma.com), or visit our website at [www.catorruma.com](http://www.catorruma.com).







# RESEARCH



*Don't wait, please donate for the 2006-2007 calendar year*

Mail Check To:

**ASHRAE RESEARCH**

c/o Big Ass Fans  
10699 Riverbrook Circle  
Littleton, CO 80126

**Your contribution puts us closer to achieving**

our goal. Please send what you can today!

\*Individual contributions of \$100 or more and  
Corporate contributions of \$150 or more  
receive this year's Commemorative Coin  
and Honor Roll Contribution status.

Name: \_\_\_\_\_

Company: \_\_\_\_\_

Address: \_\_\_\_\_

TEL: \_\_\_\_\_

|            |         |          |          |          |
|------------|---------|----------|----------|----------|
| INDIVIDUAL | \$25.00 | \$50.00  | \$75.00  | \$100.00 |
| CORPORATE  | \$75.00 | \$100.00 | \$175.00 | \$250.00 |

Other: \_\_\_\_\_

Other: \_\_\_\_\_

Or call Brian Lynch at 303.346.8955



## ROCKY MOUNTAIN CHAPTER



## FIRST CLASS

Chapter may not act for Society. Expressions, opinions, and comments within this newsletter should not be taken as those of the Chapter or Society.

Rocky Mountain Chapter of ASHRAE  
c/o Ken Urbanek, E.I.T.  
MKK Consulting Engineers, Inc.  
7600 East Orchard Road  
Greenwood Village, CO 80111-2518



## ACTIVITIES CALENDAR



For membership info or change of address contact: Larry Hodgins • Ace Mechanical • [larry@acemechanical.com](mailto:larry@acemechanical.com)

|                                               |                                                                                                                                                                                          |
|-----------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| January 10, 2006                              | Rocky Mountain ASHRAE Chapter Meeting Xcel Energy's Commercial and Industrial Energy Conservation Rebate Programs Wynkoop (Please note the date it is the SECOND WEDNESDAY of the month) |
| February 2, 2007                              | Rocky Mountain ASHRAE - D.U. Hockey Night                                                                                                                                                |
| February 7, 2007                              | Rocky Mountain ASHRAE Chapter Meeting Topic T.B.D. Wynkoop                                                                                                                               |
| February 18 <sup>th</sup> to 24 <sup>th</sup> | Engineers Week                                                                                                                                                                           |
| March 7, 2007                                 | Rocky Mountain ASHRAE Chapter Meeting Victor Goldschmidt ASHRAE Distinguished Lecturer Topic T.B.D. Wynkoop                                                                              |
| April 4, 2007                                 | Rocky Mountain ASHRAE Chapter Meeting Topic T.B.D. Wynkoop                                                                                                                               |
| May 2, 2007                                   | Rocky Mountain ASHRAE Chapter Meeting Topic T.B.D. Wynkoop                                                                                                                               |
| May 18, 2007                                  | Rocky Mountain ASHRAE Technical Conference - Engineering for Sustainability Keynote speaker Terry Townsend (Society President) - Sheraton West Hotel in Lakewood                         |

Visit the new Rocky Mountain ASHRAE website:

[www.rockymtnashrae.com](http://www.rockymtnashrae.com)



Volume 48, Number 6

FEBRUARY 2007

Editor: Ken Urbanek



## FEBRUARY MEETING



Visit the new Rocky Mountain ASHRAE website: [www.rockymtnashrae.com](http://www.rockymtnashrae.com)

**Date:** February 7, 2007

**Cost:** Rocky Mtn Chapter Members-\$25\*

\*With Reservations Made Before Monday Noon

**Dinner** Wynkoop Brewing Company

**Location:** 1634 18th St.

Denver, CO 80202

(Downtown, Corner of 18<sup>th</sup> & Wynkoop)

Guests, Non-members or Without Reservation - \$30

Students - \$20

**RSVP: Justin Dunkin**

E-mail: [justind@cfmcompany.com](mailto:justind@cfmcompany.com)

**Time:** 5:30 Social Hour (Wynkoop)

6:30 Dinner (Wynkoop)

7:00 Program Begins (Wynkoop)



## RESEARCH PROMOTION



### Thank you Air Purification Company and Engineered Air

Special thanks go out to **Air Purification Company** for sponsoring last month's Research Raffle prize. They donated tickets to an Avalanche hockey game. February's meeting prize will be sponsored by **Engineered Air**. They will be donating tickets to an Avalanche game as well!

If your company is interested in sponsoring the Research Raffle, please contact Brian Lynch.

### ASHRAE Research at Work: ASHRAE Standard 55

**The ASHRAE Research Strategic Plan centers on the concept of Sustainability.** One of the goals of this research is to optimize and make consistent **ASHRAE Standards 90, 62, and 55** to achieve measured and verified high system energy efficiency with high indoor environmental quality (IEQ) for indoor built environments. This month we will take a look at ASHRAE Standard 55 in particular. Even when it is 100 degrees outside, your office is a **comfortable** 72°F, thanks to ASHRAE's Standard 55. The standard specifies the combinations of indoor thermal environmental factors and personal factors that will produce thermal environmental conditions acceptable to 80 percent or more of the occupants. These environmental factors include temperature, thermal radiation, humidity and air speed, while personal factors are activity and clothing.



# RESEARCH PROMOTION



ASHRAE Research is continually looking at ways to improve occupancy conditions while saving energy. ASHRAE 55 Research is being done to look at natural and hybrid ventilation systems, the effects of radiant energy and air speed to expand the thermal comfort envelope, and the ability of people to adapt to their environment.

Research has also shown that a strong link exist between thermal comfort and indoor air quality. Next month's newsletter will cover ASHRAE Research contributions to Standards 62.1 and 62.2.

Thank you for your support of ASHRAE Research.

Regards,

Brian Lynch  
Resource Promotion/President Elect  
ASHRAE Rocky Mountain Chapter  
[blynch@bigassfans.com](mailto:blynch@bigassfans.com)



## FEBRUARY PROGRAM INFO



### Introduction to BAS Technology

Speaker: Dave Kahn, RMH Group

This presentation will give the basics for understanding BAS technology including field devices and controllers. It then will progress to control theory and programming and sequences. ASHRAE Guideline 13 Specifying Direct Digital Control Systems will be introduced along with other resources for furthering knowledge of BAS Technology.

Dave is a Professional Engineer licensed in Mechanical and Fire Protection disciplines, Past Chairman of ASHRAE Technical Committee TC 1.4 - Controls and Applications, Member SGPC 135 - Specifying DDC Control Systems, Corresponding Member TC 7.5 - Smart Buildings





# ROCKY MOUNTAIN ROSTER



President .....Kevin Parrot .....KevinP@trinity-mechanical.com

President Elect .....Brian Lynch.....blynch@bigassfans.com

Vice President .....Scott Martin .....smartin@rmhgroup.com

Secretary .....Jeremy Hollands .....jhollands@catorruma.com

Treasurer .....Justin Dunkin .....justind@cfmcompany.com

Newsletter Editor .....Ken Urbanek.....kurbanek@mkkeng.com

Membership .....Larry Hodgins .....larry@acemechanical.com

Refrigeration .....Dave Rodenberg.....drodenberg@long.com

Historian .....Adam Bishop.....adamb@cfmcompany.com

Technology Transfer .....Ken Urbanek.....kurbanek@mkkeng.com

Resource Promotions .....Brian Lynch.....blynch@bigassfans.com

Web Master .....Kyle Manske.....kmanske@comfortsystemsusa.com

Education Chairman .....Kevin Ainsworth .....kainsworth@mcgrath-inc.com

Director .....Mark Jelinske.....mjelinske@catorruma.com

Director .....Kevin Ainsworth .....kainsworth@mcgrath-inc.com

Past President .....John Stumpf .....john.stumpf@york.com





# PRESIDENT'S MESSAGE



Dear Rocky Mountain ASHRAE:

I hope everyone plans on enjoying DU hockey night on Friday (or had a great time depending on when you receive the newsletter). Research promotion events like this are always fun for the family and a great way to enjoy your ASHRAE membership.

For those who didn't know, ASHRAE held the Winter Meeting in Dallas last week. Among the items discussed was a memorandum of understanding between REHVA and ASHRAE. Below is part of a press announcement released by National ASHRAE on January 25<sup>th</sup>. In part it reads:

ASHRAE and the Federation of European Heating and Air-Conditioning Associations (REHVA) have formalized a longtime relationship through signing of a new memorandum of understanding. The memorandum, signed today at ASHRAE's 2007 Winter Meeting, calls for increased cooperation between the two associations.

"This agreement strengthens the long-time relationship between ASHRAE and REHVA," Terry Townsend, president of ASHRAE, said. "We must continue to work together to gain technical knowledge and to share it. The engineers who belong to ASHRAE and REHVA are searching for new technology and guidance to develop safe, comfortable, healthy energy-efficient buildings. This agreement encourages our organizations to work together to ensure more sustainable environments all around the world."

REHVA represents 30 national engineering associations in Europe representing more than 100,000 experts in the area of heating, air-conditioning, ventilation and refrigeration. It is based in Brussels, Belgium.

This alliance is in keeping with this year's mission statement of 'Engineering for Sustainability'. Which just happens to also be the theme for this year's Technical Conference on May 18<sup>th</sup>. If you are interested in helping or have top quality speaker suggestions please contact Brian Lynch at [blynch@bigassfans.com](mailto:blynch@bigassfans.com).

One last note: Engineers Week is February 18<sup>th</sup> 24<sup>th</sup>. You can find out more information at <http://www.eweek.org/> or how you can help get students involved by contacting Ronnie Zimmerman at [rzimmerman@mkkeng.com](mailto:rzimmerman@mkkeng.com).

Thank you,  
Kevin Parrot  
President, Rocky Mountain Chapter ASHRAE  
[kevinp@trinity-mechanical.com](mailto:kevinp@trinity-mechanical.com)





# CRC ANNOUNCEMENT



## CRC 2008 Denver Colorado August 13<sup>th</sup> 18<sup>th</sup>

Good afternoon ASHRAE Members,

I have been asked to Chair the Convention of Regional Chairs (CRC) here in Denver and for those that have been involved in that process or have attended one of these events know that it takes a lot of effort of the local chapter to make this an enjoyable and successful event.

I am soliciting the general membership to ensure that everyone has an opportunity to participate. The kick off meeting for this will be the second or third week in January. Once I get responses of those interested I will send out a time and place where we will meet to move forward.

This commitment would require monthly meetings for approx an hour over lunch and as the event gets closer we would meet more frequently to ensure that all the details are covered.

Here are a few of the committees that are available so if you are interested in one over the other please inform me of your interest.

**Banquet / Hotel** Curtis Hotel is the location Banquet details needed

**Companions** - Hospitality Room, Sightseeing events, transportation Ensuring that they have a place to meet and events to attend.

**Decorations** Gift Baskets, Banners, etc.

**Entertainment** Coordinate Events on and off site.

**Finance** Budget reconciliation of income and expenses

**Publicity** Mailers, Printing, Photography, Interviews, Special Invitations, and other publicity items

**Reception and Registration** Welcoming Guest, Registration, Name badges, Pre-Registration, Meeting Venue and Identification Signs.

**Social**- Presidents Luncheon, Banquets, Awards Functions, Employers Recognition breakfast

**Technical Programs**-Technical Talks, Panel Forums, Technical Tours, - Coordinating these events and speakers.

**Transportation** - Coordinate arrival of delegates and ensure adequate transportation is provided for all events.

Please respond via email to [john.d.stumpf@jci.com](mailto:john.d.stumpf@jci.com) for further details or to volunteer to make this the best CRC in decades.







# CTTC Technology



## The Latest in Technical, Energy, and Government Activities



**ASHRAE Satellite Broadcast -  
Indoor Environmental Design:  
Practical Solutions to  
Everyday Problems - April 18,  
2007 11:00 A.M. 2:00 P.M. MST**

This free broadcast will present specific solutions to the everyday challenges of achieving indoor environmental quality within real-world budget constraints. Speakers will describe how you can provide ventilation air that helps protect the building from mold risk, how to avoid the three most common mistakes in ventilation system design and operation, how to achieve all three goals of IAQ, thermal comfort and noise control at lower cost through better air distribution decisions, and how to provide comprehensive filtration without breaking your budget. This program is sponsored by ASHRAE's Chapter Technology Transfer Committee.

Local Rocky Mountain Chapter Satellite Broadcast site locations to be determined and announced at a later date. Satellite Broadcast can be viewed through a web cast available from the ASHRAE website. For more information please refer to the ASHRAE website at [www.ashrae.org](http://www.ashrae.org). If you have any questions regarding Technical, Energy, and Government Activities with respect to ASHRAE please contact local Chapter Technology Transfer Committee Chair Ken Urbanek via e-mail at [kurbanek@mkkeng.com](mailto:kurbanek@mkkeng.com).



## PRODUCT GUIDE



### **ASHRAE/SMACNA COLORADO 2007 HVAC&R MECHANICAL EQUIPMENT & PRODUCT DIRECTORY**

Available for purchase in late January for \$45 a copy.

A complete list of available product lines and services makes this directory an invaluable resource! It includes current product and contract information for representatives, distributors, wholesalers, engineers, contractors and other related businesses within the HVAC&R industry.

Look for it at the monthly ASHRAE meeting or contact Ronnie Zimmerman, MKK Consulting Engineers at 303-796-6089 or [rzimmerman@mkkeng.com](mailto:rzimmerman@mkkeng.com).





# NATIONAL ASHRAE SCHOLARSHIP PROGRAM



The ASHRAE Scholarship Program is designed to encourage and assist in the education of men and women pursuing a career in the field of heating, ventilating, air conditioning and refrigeration (HVAC&R) through its granting of scholarships and fellowships. The program also serves the public interest by aiding in the education of men and women to become qualified to practice as engineers in the HVAC&R field.

For more information and scholarship applications please visit the ASHRAE website at <http://www.ashrae.org>



## MEMBERSHIP PROMOTION



Welcome to December's edition of "The Membership Promotion Page." Please take a close look at the chapter's roster located at [www.rockymtnashrae.com](http://www.rockymtnashrae.com) for the following:

1. If you are a member of ASHRAE (student, associate, member, etc.) your name should be included within the roster.
2. If you have requested that your contact address be your residential address, I have only included your name and the city and state of your residence.
3. If you have requested that your contact address be your business address, I have included your name, the business name and mailing address, and your email address.
4. If a "0" appears where your email address should be, ASHRAE does not have an email address for you assuming your contact address is your business address.
5. Your name appears in the same format ASHRAE has it recorded. I have not attempted to add "Dr", "PE", "PhD" or other pertinent information that ASHRAE does not have.
6. If any of your information is incorrect, or if you want changes made to your information, please send an email to [larry@acemechanical.com](mailto:larry@acemechanical.com) and I will make the requested changes.
7. If you have been omitted from this list and want to know why, please send an email to [larry@acemechanical.com](mailto:larry@acemechanical.com) and I will research why ASHRAE is not including you. Common reasons for omission include human error and unpaid ASHRAE membership dues.







# FEBRUARY EMPLOYMENT LISTINGS



Position: Mechanical Engineer  
Company: Geo-Energy Services  
Web Site: [www.geoenergyservices.com](http://www.geoenergyservices.com)  
Main Phone: 303-531-5292  
Fax: 303-805-3563  
Address: 15660 East Hinsdale Drive, Ste 210, Centennial, CO 80112

Contact: Trey Austin  
Contact Phone: 303-531-5292  
Contact Email: [trey@geoenergyservices.com](mailto:trey@geoenergyservices.com)

Geo-Energy Services is a Denver based engineering design firm specializing in ground source heat pump systems. We are currently seeking energized, creative individuals to fulfill the growing demand for our services. If you are interested in working on advanced, integrated HVAC projects, please send your resume to our office. This position will include project development and execution, engineering design, observation of system installations, and system startup.

We are currently interviewing candidates with the following qualifications:  
A Bachelor's Degree in Mechanical Engineering or Architectural Engineering.  
A minimum of 3-5 years experience in mechanical building systems design.  
Experience working with AutoCAD/Autodesk Building Systems.

Additional desired qualifications as applicable:  
Experience with ground source heat pump projects  
PE license  
LEED AP  
Commercial and/or Residential design  
Familiar with TRACE 700  
Familiar with eQUEST  
Other load calculation/energy modeling software

=====

Position: Engineer (Energy Services)  
Company: Platte River Power Authority  
Web Site: [www.prpa.org](http://www.prpa.org)  
Main Phone: 970-229-5606  
Fax: 970-207-4255  
Address: 2000 East Horsetooth Road  
Fort Collins, CO 80525

Contact: Sharon Basinger  
Contact Phone: 970-229-5606  
Contact Email: [basingers@prpa.org](mailto:basingers@prpa.org)





# EMPLOYMENT LISTINGS



## More Info:

Platte River Power Authority, the wholesale provider of low-cost, reliable & environmentally responsible electricity to the municipalities of Fort Collins, Loveland, Longmont & Estes Park, Colorado, is accepting applications for an Engineer to provide support in energy efficiency & renewable energy program operations. Qualifications include Bachelor's in engineering & 3 yrs experience in energy efficiency program operations. Visit our website for additional information at [www.prpa.org](http://www.prpa.org). To apply, send cover letter, resume & application to Platte River Power Authority, 2000 E. Horsetooth Road, Fort Collins, CO 80525 or fax to 970-207-4255 by February 9, 2007. EOE

=====

Position: Mechanical Engineer, HVAC/Plumbing Designer  
Company: Cator, Ruma & Associates  
Website: [www.catorruma.com](http://www.catorruma.com)  
Main Phone: 303-232-6200  
FAX: 303-233-3701  
Address: 1550 Dover St., Suite 2  
Lakewood, Co 80215  
Contact: send resumes to [cra-resumes@catorruma.com](mailto:cra-resumes@catorruma.com)

## More Information:

Cator, Ruma & Associates is seeking HVAC/Plumbing designer with AutoCAD experience. Some college preferred, and local residents preferred. CRA is a mechanical/electrical engineering firm who has enjoyed 46 years of providing consulting services in a variety of fields including healthcare, telecommunications, governmental, and commercial work. Visit our website at [www.catorruma.com](http://www.catorruma.com).

If you are interested in working on technically challenging HVAC, plumbing and fire-protection design projects, we are interested in discussing career opportunities with you. We are hiring MECHANICAL ENGINEERS/DESIGNERS for new/added positions with experience in mechanical building systems design.

We can offer you an excellent compensation package including a competitive salary, paid major medical, including dental and vision, with flexible spending, 401K, disability and supplemental life, gym membership, generous paid holidays and vacation, flex time and Friday afternoons off.

=====





# EMPLOYMENT LISTINGS



Position(s): Mechanical Engineer, Electrical Engineer  
Company: Summit MEP Consultants, Inc.  
Web site: [www.summitmep.com](http://www.summitmep.com)  
Phone: 303-904-9585  
Fax: 303-948-2269  
Address: 2750 S. Wadsworth Blvd., Suite D-202, Denver, CO 80227  
Contact: Michael McGraw, Vice President  
Email resume in strictest confidence to [mem@summitmep.com](mailto:mem@summitmep.com)

## Mechanical Engineer

Position requires motivated, degreed engineer with multiple talents including: client development, project management and design of HVAC, plumbing and fire protection. LEED AP certification is a plus. Hiring bonus offered for successful candidate or successful referral.

## Electrical Engineer

Position requires motivated, degreed engineer with multiple talents including: client development, project management and design of power, lighting and fire alarms. Hiring bonus offered for successful candidate or successful referral. PE certification is a plus.

=====

Position: HVAC / Refrigeration Service Technician  
Company: Apex Wine Cellars  
Web Site: [www.apexwinecellars.com](http://www.apexwinecellars.com) , [www.cellartec.com](http://www.cellartec.com)  
Main Phone: (888) 999-9749  
Fax: (425) 486-5323  
Address: 15540 Woodinville Redmond Rd.  
Woodinville, WA 98072

Contact: Cam Nichols  
Contact Phone: (888) 999-9749 x 248  
Contact Email: [camn@groupapex.com](mailto:camn@groupapex.com)

## More Info:

### **HVAC/REFRIGERATION SERVICE TECHNICIAN**

Apex Wine Cellars is the fastest growing manufacturer of custom designed wine cellar racking in the country. We have an immediate position available for a well qualified HVAC / Refrigeration Technician, holding current City and County of Denver Refrigeration Certificate for our local branch in Littleton, Colorado. This is a fantastic opportunity for the right person to establish themselves with an industry leading national company. The successful candidate must have advanced technical ability including refrigeration piping and controls wiring as well as good communication skills (verbal and written).





# EMPLOYMENT LISTINGS



Work responsibilities to include installation and service of wine cellar refrigeration systems, ducting, humidifiers and control units.

Competitive compensation and benefit package.

Please e-mail resume including references and CO. D.L info to: [camn@groupapex.com](mailto:camn@groupapex.com).

=====

Position(s): HVAC Sales, inside (1) and outside (1)  
Company: Empire Gas & Electric Equipment  
Web Site: [www.empiregas.com](http://www.empiregas.com)  
Main Phone: 303.623.7747  
Fax: 303.623.5526  
Address: 4900 Osage St. #100; Denver, CO; 80221

Contact: Tom Garretson  
Contact Phone: 303.623.7747  
Contact Email: [tgaretson@empiregas.com](mailto:tgaretson@empiregas.com)

## More Info:

Candidates should have a minimum of 3 years experience in the HVAC industry with an emphasis on commercial sales. Duties include application and pricing of commercial equipment; calling on specifying engineers, and assisting contractors on design-build projects. Inside sales will also prepare approval documents and administer sales orders. Outside sales will also work with contractors in areas of business development, sales/marketing and technical training. Both positions require strong communication skills. Send resume to 720-931-3496.

Empire Gas, founded in 1947, is a major distributor of HVAC equipment, controls and supplies in the Rocky Mountain region.

=====

Position: Sr. Facilities Engineer  
Company: Raytheon Polar Services Company  
Web Site: [www.rpsc.raytheon.com](http://www.rpsc.raytheon.com)  
Main Phone: 720-568-2094  
Fax: 303-662-8770  
Address: 7400 S. Tucson Way  
Centennial, CO 80112  
Contact: Miranda De Zwarte  
Contact Phone: 720-568-2094  
Contact Email: [Miranda.dezwarte@usap.gov](mailto:Miranda.dezwarte@usap.gov)







# EMPLOYMENT LISTINGS



## More Info:

Seeking a unique adventure as well as employment? How would you like to be one of the few people on the planet to set foot on the 7<sup>th</sup> continent? Raytheon Polar Services is *the* primary contractor for the National Science Foundation's (NSF) U.S. Antarctic Program. We are seeking a full-time, **Sr. Facilities Engineer (TSC107435)** to work in our Centennial, CO office. This position will *deploy each austral summer (Oct. Feb.) to South Pole Station*.

The Sr. Facilities Engineer will be responsible for engineering investigations of facilities, equipment and operational issues; design, planning and executing small engineering projects as well as defining and budgeting large future maintenance projects for South Pole station in Antarctica. They will also be responsible for conducting facility assessments and code compliance and construction review.

Education: Bachelors Degree in facilities related Engineering discipline or similar field. Mechanical or Electrical Engineering degree preferred.

## Required Qualifications:

Minimum eight years of increasing responsibility in facilities engineering design and maintenance with an emphasis in mechanical and electrical activities.

Must be highly knowledgeable in building systems to include, HVAC, boilers, furnaces, hydronic heating systems, DDC and thermostatic controls and plumbing and electrical systems.

## Desired Qualifications:

Basic understanding of energy conservation and fire protection preferred

Experience in system and project design, specification preparation and review, project scheduling, and project cost estimating is helpful.

Experience in the development, implementation, and supervision of preventive maintenance and work control systems are highly desirable.

Knowledge of water purification and power generation facilities is also preferred.

Experience with/knowledge of chemical, civil and structural engineering preferred.

Certifications by International Code Council (ICC) in inspection or plan review desirable.

Professional Engineering registration is preferred.

To find out more about these and other open positions and to apply, please go to [www.RayJobs.com](http://www.RayJobs.com). Click on *Professional Recruiting* and that will get you into the site. If you are a first time user it will be necessary to register, create a profile and login. Once that is done, please search for and pull up the position by entering the corresponding TSC# listed above in the keyword search field click SEARCH. That will pull up that requisition and you can open it up and see a job description. To submit your resume to the position click on SUBMIT NOW in the upper right corner.

=====





# EMPLOYMENT LISTINGS



Position: Project Engineer  
Company: Trinity Mechanical, Inc.  
Main Phone: 303.442.3175  
Fax: 303.939.8017  
Address: 3095 Sterling Cir. West #3, Boulder, CO 80301

Contact: Kevin Parrot  
Contact Phone: 303.442.3175  
Contact Email: Kevinp@Trinity-Mechanical.com

## More Info:

Trinity Mechanical is a Boulder based Design-Build mechanical contractor that performs commercial work along the Front Range. We are looking for a motivated individual to assist our team in all facets of construction from design, project management, estimating, and procurement. The right individual would have a BS in mechanical engineering or equivalent experience, be willing to learn, and be results oriented. Good communication both written and verbal and general computer skills a must. AutoCAD experience a plus.

=====  
Position(s): Mechanical Engineer P.E. & Electrical Engineer P.E.  
Company: Shaffer Baucom Engineering & Consulting  
Web Site: sbengr.com  
Main Phone: 303.986.8200  
Fax: 303.986.8222  
Address: 7333 W. Jefferson Ave., Suite 230 Lakewood, CO 80235

Contact: Ellie Dugle  
Contact Phone: 303.986.8200  
Contact Email: edugle@sbengr.com

## More Info:

Shaffer Baucom Engineering & Consulting is a mechanical & electrical consulting firm in Lakewood, CO. Principals of the firm have served owners/clients in the Denver area for over 25 years. The ideal candidate would have a minimum of 7 years experience as a consulting engineer. PE license is required. We have an excellent benefit package. We offer a very competitive salary and bonus program. Please send your resume and references to Ellie Dugle at the above mailing or email address.

=====  
Position: Estimator  
Company: RK Mechanical, Inc.  
Main Phone: 303-355-9696  
Fax: 303-336-5820  
Address: 9300 E. Smith Road, Denver, CO 80126





# EMPLOYMENT LISTINGS



Contact: KC Ceranich  
Contact Phone: 303-355-9696  
Contact Email: [kccheranich@rkmi.com](mailto:kccheranich@rkmi.com)

## More Info:

RK Mechanical, Inc. is Colorado's largest mechanical contractor. We've been around for over 40 years. We are the sub-contractor of choice for mechanical contracting for large commercial, medical, educational, governmental and industrial projects all over the state. Our growth over the past year has been incredible and it continues with no end in sight. We also have our own on site fabrication facility for all our duct and pipe work. Consider joining this dynamic quality organization as a Senior Estimator.

This individual would fit the following criteria at a minimum:

Minimum of 5 years estimating experience in the plumbing and/or hydronic piping field, or a combination of 2 years estimating and 5 years of field experience. Mechanical room experience is a definite plus.

- ..... Strong computer skills are required. Working knowledge of Excel, Word, Outlook, etc.
- ..... Estimating experience is a plus.
- ..... Good knowledge of plumbing and/or hydronic piping systems.
- ..... Good to above average phone/people skills.
- ..... Able to read and interpret blue prints and specifications.
- ..... A certain degree of creativity and latitude.
- ..... A valid Colorado Drivers License.
- ..... Proactive and a team player.
- ..... Must be able to: multi-task, handle stress, meet deadlines, work in a professional environment
- ..... Communicate well with others (internal & external)
- ..... This is a full-time salary position with benefits.
- ..... Only hard workers and self motivated people will be considered
- ..... Average 45+ hours per week. Staying late and weekend work may be required to meet deadlines.

Send resume and salary requirements to [jobs@rkmi.com](mailto:jobs@rkmi.com) or fax 303-336-5820  
DFWEOE/m/f/d/v/s  
Reference: PPE092006 in subject line

=====





# RESEARCH



*Don't wait, please donate for the 2006-2007 calendar year*

Mail Check To:

**ASHRAE RESEARCH**  
c/o Big Ass Fans  
10699 Riverbrook Circle  
Littleton, CO 80126

**Your contribution puts us closer to achieving**

our goal. Please send what you can today!

\*Individual contributions of \$100 or more and  
Corporate contributions of \$150 or more  
receive this year's Commemorative Coin  
and Honor Roll Contribution status.

Name: \_\_\_\_\_

Company: \_\_\_\_\_

Address: \_\_\_\_\_

TEL: \_\_\_\_\_

|            |         |          |          |          |
|------------|---------|----------|----------|----------|
| INDIVIDUAL | \$25.00 | \$50.00  | \$75.00  | \$100.00 |
| CORPORATE  | \$75.00 | \$100.00 | \$175.00 | \$250.00 |

Other: \_\_\_\_\_

Other: \_\_\_\_\_

Or call Brian Lynch at 303.346.8955



## ROCKY MOUNTAIN CHAPTER



## FIRST CLASS

Chapter may not act for Society. Expressions, opinions, and comments within this newsletter should not be taken as those of the Chapter or Society.

Rocky Mountain Chapter of ASHRAE  
c/o Ken Urbanek, E.I.T.  
MKK Consulting Engineers, Inc.  
7600 East Orchard Road  
Greenwood Village, CO 80111-2518



## ACTIVITIES CALENDAR



For membership info or change of address contact: Larry Hodgins • Ace Mechanical • [larry@acemechanial.com](mailto:larry@acemechanial.com)

- February 7, 2007      Rocky Mountain ASHRAE Chapter Meeting   Topic T.B.D. - Wynkoop
- February 18th to 24th Engineers Week
- March 7, 2007      Rocky Mountain ASHRAE Chapter Meeting   Victor Goldschmidt ASHRAE  
Distinguished Lecturer   Topic T.B.D.   Wynkoop
- April 4, 2007      Rocky Mountain ASHRAE Chapter Meeting   Topic T.B.D.   Wynkoop
- April 18, 2007      ASHRAE Satellite Broadcast   Indoor Environmental Design: Practical Solutions to  
Everyday Problems   11:00 a.m. to 2:00 p.m. (MST)
- May 2, 2007      Rocky Mountain ASHRAE Chapter Meeting   Topic T.B.D.   Wynkoop
- May 18, 2007      Rocky Mountain ASHRAE Technical Conference   Engineering for Sustainability  
Keynote Speaker Terry Townsend (Society President)   Sheraton West Hotel in  
Lakewood

**Visit the new Rocky Mountain ASHRAE website:**

**[www.rockymtnashrae.com](http://www.rockymtnashrae.com)**



NEWSLETTER OF THE ROCKY MOUNTAIN CHAPTER  
AMERICAN SOCIETY OF HEATING, REFRIGERATING, AND AIR-CONDITIONING ENGINEERS, INC.

Volume 48, Number 7

MARCH 2007

Editor: Ken Urbanek



## MARCH MEETING



Visit the new Rocky Mountain ASHRAE website: [www.rockymtnashrae.com](http://www.rockymtnashrae.com)

**Date:** March 7, 2007

**Cost:** Rocky Mtn Chapter Members-\$25\*  
\*With Reservations Made Before Monday Noon

**Dinner Location:** Wynkoop Brewing Company  
1634 18th St.  
Denver, CO 80202  
(Downtown, Corner of 18<sup>th</sup> & Wynkoop)

Guests, Non-members or Without Reservation - \$30  
Students - \$20

**RSVP: Justin Dunkin**  
E-mail: [justind@cfmcompany.com](mailto:justind@cfmcompany.com)

**Time:** 5:30 Social Hour (Wynkoop)  
6:30 Dinner (Wynkoop)  
7:00 Program Begins (Wynkoop)



## MARCH PROGRAM



### Differing Perspectives Into Ozone Depletion and Global Warming

#### Topic

This lecture is intended to provide a different perspective to the usual formal presentation on these topics. It was the consequence of attempting to analyze the available data to demonstrate the reality of ozone depletion and global warming. Unfortunately, the analysis led to the conclusion that the only reality is in the uncertainties in these areas. Data demonstrating the ozone depletion and global warming trends are summarized and the common understanding of terminology such as ODP and GWP is presented. The lecture ends with a listing of assumptions and aspects of the data that could raise questions as to the validity of the implied trends.

#### Biography

##### **Victor Goldschmidt**

Victor Goldschmidt is an Emeritus Purdue Professor of Mechanical Engineering with more than 35 years of lecturing experience, Fellow and Past Director-at-Large of ASHRAE, and honorary member of the IIR (International Institute of Refrigeration), ACAIRE (Colombia Association of Air Conditioning and Refrigeration, AAF (Argentine Association of Cold), and ASURVAC (Uruguay Association of Refrigeration, Ventilation, Air Conditioning and Heating). His industrial experience includes having been an Application Engineer, and a Development Engineer with Honeywell, as well as serving as team leader with numerous research contracts with the HVAC&R industry. He also led research teams through grants with the DOD, NSF, and other governmental bodies. With more than 200 publications, he served as mentor to both graduate and undergraduate students. He has also served as Head of an academic unit, driving them through a meaningful period of change and growth. Currently he is a facilitator to problem solving and strategic planning sessions, an "ASHRAE Distinguished Lecturer", and an elected Trustee in the Leelanau Township Board in the Lower Northwest Michigan.



# MARCH SPECIAL PROGRAM



## **“Leadership Principles: with a special focus on change, confrontation and Problem Solving”**

### **Rocky Mountain ASHRAE Chapter**

March 7, 2007

**Overview:** We are all called to be leaders; in various times and different settings whether at home, work or our communities. We move towards excellence and creative change through effective leadership. The primary components of leadership: “envision”, “equip”, “empower”, “edify”, and “evaluate” will be highlighted during the first part of the session, and enhanced via introspection and sharing.

Leaders' primary role is to serve as empathetic agents of change with sensitivity to those being led. The second part of the three-hour session will address change and effective communication, and will include some participatory activities.

One unavoidable aspect of leadership is opposition and confrontation. The third component of the session will provide highlights to confrontation and problem solving. The need for creativity and divergent as well as convergent thinking in the process of problem solving will be demonstrated through a sample problem including group participation.

**Lecturer:** Victor Goldschmidt is an Emeritus Purdue Professor of Mechanical Engineering with more than 35 years of lecturing experience, Fellow and Past Director-at-Large of ASHRAE, and honorary member of the IIR (International Institute of Refrigeration), ACAIRE (Colombia Association of Air Conditioning and Refrigeration, AAF (Argentine Association of Cold), and ASURVAC (Uruguay Association of Refrigeration, Ventilation, Air Conditioning and Heating). His industrial experience includes having been an Application Engineer, and a Development Engineer with Honeywell, as well as serving as team leader with numerous research contracts with the HVAC&R industry. He also led research teams through grants with the DOD, NSF, and other governmental bodies. With more than 200 publications, he served as mentor to both graduate and undergraduate students. He has also served as Head of an academic unit, driving them through a meaningful period of change and growth. Currently he is a facilitator to problem solving and strategic planning sessions, an “ASHRAE Distinguished Lecturer”, and an elected Trustee in the Leelanau Township Board in the Lower Northwest Michigan.

His service as an ASHRAE DL includes lectures on: Global Warming: Differing Perspectives (also could be in the form of a “shoot-out” with a second DL; or of a jury trial involving participants); Principles of Leadership and Group Dynamics; Principles of Leadership and Change; Sustainability and Energy in the Context of Power Plants; Problem Solving in Engineering; Air Conditioning: A Look Into the Past, myths and a Guess into the Future; Active Listening and Styles of Communication; ASHRAE's Core Values, Code of Ethics, and Their Implication; Releasing Individuals' Own Creativity and training sessions on: Leadership Principles; Engineering Problem Solving; Engineering Creativity; and Strategic Planning.

Victor W. Goldschmidt  
PO Box 423, Northport MI 49670  
Ph 231 386 9058, Fax 231 386 9958  
Email:creating2@earthlink.net







## MARCH RESEARCH PROMOTION



### Thank you Engineered Air and J.L. Hermon & Associates

Special thanks go out to **Engineered Air** for sponsoring last month's Research Raffle prize. They donated tickets to an Avalanche hockey game. The March meeting prize will be sponsored by **J.L. Hermon & Associates**. They will be donating a \$50.00 gift certificate to Best Buy!

If your company is interested in sponsoring the Research Raffle, please contact Brian Lynch.



## MARCH RESEARCH PROMOTION



### ASHRAE Research at Work: ASHRAE Standard 62.1 and 62.2

Last month we looked at ASHRAE Research dedicated to thermal comfort. Research has shown that a strong link exist between thermal comfort and indoor air quality. ASHRAE Standard 62.1 and 62.2 play an important role around the world in providing for occupants' well-being by improving indoor air quality. These standards provide guidance for the design and operation of HVAC systems for a range of building types and functions. ASHRAE Research works to determine the minimum requirements for maintaining a safe, healthy and comfortable indoor environment for building occupants.

Your contributions to ASHRAE Research help advance this work. Please see the donation form within this newsletter. We only have a few more months to raise our goal of \$34,263.00 (or **\$52.00 per member**).

Regards,

Brian Lynch  
Resource Promotion/President Elect  
ASHRAE Rocky Mountain Chapter  
[blynch@bigassfans.com](mailto:blynch@bigassfans.com)





# ROCKY MOUNTAIN ROSTER



President .....Kevin Parrot .....KevinP@trinity-mechanical.com

President Elect .....Brian Lynch.....blynch@bigassfans.com

Vice President .....Scott Martin .....smartin@rmhgroup.com

Secretary .....Jeremy Hollands .....jhollands@catorruma.com

Treasurer .....Justin Dunkin .....justind@cfmcompany.com

Newsletter Editor .....Ken Urbanek.....kurbanek@mkkeng.com

Membership .....Larry Hodgins .....larry@acemechanical.com

Refrigeration .....Dave Rodenberg.....drodenberg@long.com

Historian .....Adam Bishop.....adamb@cfmcompany.com

Technology Transfer .....Ken Urbanek.....kurbanek@mkkeng.com

Resource Promotions .....Brian Lynch.....blynch@bigassfans.com

Web Master .....Kyle Manske.....kmanske@comfortsystemsusa.com

Education Chairman .....Kevin Ainsworth .....kainsworth@mcgrath-inc.com

Director .....Mark Jelinske.....mjelinske@catorruma.com

Director .....Kevin Ainsworth .....kainsworth@mcgrath-inc.com

Past President .....John Stumpf .....john.stumpf@york.com





# PRESIDENT'S MESSAGE



Dear Rocky Mountain ASHRAE:

We have an exciting set of meetings this month. I expect a large turnout so please get your reservations in early. Scott Martin has lined up an ASHRAE Distinguished Lecturer, Victor Goldschmidt. Please see Scott's program listing for bio information and specific topic. I saw Victor talk a few years ago at a CRC and I can tell you from personal experience that he is a very informed and animated speaker.

In addition to our normal evening meeting at the Wynkoop we are also planning an afternoon seminar also given by Mr. Goldschmidt on leadership. This is something we haven't done in the recent past, but offers a unique opportunity for people to see and interact with a distinguished speaker. Please look in the newsletter for details including location, times and cost.

I would like to congratulate Dr. Michael Brandemuehl. Based on a recommendation of the national Honor and Awards Committee, the ASHRAE Board of directors has voted to honor Dr. Brandemuehl with a Distinguished Service Award. This award recognizes members for giving freely of their time and serving with distinction on committees. Michael continues to be our liaison and the advisor for the University of Colorado at Boulder ASHRAE chapter among all of his other involved at the Society level.

Thank you,  
Kevin Parrot  
President, Rocky Mountain Chapter ASHRAE  
[kevinp@trinity-mechanical.com](mailto:kevinp@trinity-mechanical.com)





## The Latest in Technical, Energy, and Government Activities



### Free ASHRAE Satellite Broadcast/Webcast “Indoor Environmental Design: Practical Solutions to Everyday Problems”

April 18, 2007 11:00 A.M. 2:00 P.M. MDT

This broadcast will provide specific solutions to the everyday challenges of achieving indoor environmental quality within real-world budget constraints. The program will benefit designers, building owners, architects and contractors who are faced with the daily engineering challenge of specifying systems that maximize IAQ, thermal comfort and noise control. This FREE program is sponsored by ASHRAE's Chapter Technology Transfer Committee. For complete details, visit our website at [www.ashrae.org/iedbroadcast](http://www.ashrae.org/iedbroadcast).

#### How to Participate

You may host a Satellite Broadcast/Webcast for your colleagues, you may register to view the Satellite Broadcast/Webcast at a local site (see below), or you may register to view the Webcast on you PC.

#### Local Broadcast/Webcast Sites Hosted By Local ASHRAE Sponsor's

I. South Denver Metro Area MKK Consulting Engineers, Inc. 7600 East Orchard Rd. Suite 250S, Greenwood Village, CO (Webcast Site)

As seating is limited please RSVP to Ken Urbanek at [kurbanek@mkkeng.com](mailto:kurbanek@mkkeng.com) by April 16, 2007 with your preferred viewing site. Participants of Local Broadcast Sites are also encouraged to register online.

#### Broadcast Topics

- ☐ “An Overview Perspective on Indoor Environmental Quality” Bill Coad, P.E.
- ☐ “Ventilation Air First, Do No Harm” Lew Harriman
- ☐ “Ventilation System Design Avoiding Three Common Mistakes” Hoy Bohanon Jr., P.E.
- ☐ “Behind the Access Door Advances in Affordable Filtration for IAQ” Chris Muller
- ☐ “Noise, IAQ and Thermal Comfort Can You Have It All?” Dan Int-Hout

#### New National ASHRAE Membership Discount

Non-member participants will be given a \$50 discount for applying for national ASHRAE membership. A special membership application will be available at satellite broadcast sites or by request at 678-539-1139.





## Registration

Online registration for Satellite Broadcast Site Coordinators and Webcast Participants will begin March 15, 2007, at <http://www.ashrae.org/education>. There is no fee for registration. If you have any questions contact local Chapter Technology Transfer Committee Chair Ken Urbanek via e-mail at [kurbanek@mkkeng.com](mailto:kurbanek@mkkeng.com) or call at 303-796-6000.

### **ASHRAE Technology Awards Many Rocky Mountain Chapter Awards Available**

Each year the Society reviews applications for Technology Awards in seven categories: Commercial Buildings; Institutional Buildings; Health Care Facilities; Industrial Facilities or Processes; Public Assembly; Residential and Alternative or Renewable Energy Use. All categories carry awards for both new and existing buildings in first, second and third place. Many awards are available, including multiple Rocky Mountain Chapter awards, and the Society encourages ASHRAE members to submit any project they have been involved in which demonstrates technological achievements. These awards recognize ASHRAE members who design innovative systems, and communicate the designs to other members as well as building and facility owners.

To apply for an award, fill out the Chapter Technology Award Application (Short Form), available at the monthly meeting or contact CTTC Chair Ken Urbanek at [kurbanek@mkkeng.com](mailto:kurbanek@mkkeng.com) for an application. The awards focus on five criteria: Energy Efficiency; Indoor Air Quality; Innovation; Operation and Maintenance; Cost Effectiveness and Environmental Impact. Not all scoring topics must apply to the project to be considered for an award. Winners in each category will receive a local award and then they will be submitted to the Regional CTTC Vice Chair and can be considered for International awards, or the Engineering Award of Excellence. All applications are due by April 23rd, 2007 and local recipients of the Technology Award will be announced at the final Chapter meeting in May.

If you have any questions regarding Technical, Energy, and Government Activities with respect to ASHRAE please contact local Chapter Technology Transfer Committee Chair Ken Urbanek via e-mail at [kurbanek@mkkeng.com](mailto:kurbanek@mkkeng.com).



## NATIONAL ASHRAE SCHOLARSHIP PROGRAM



The ASHRAE Scholarship Program is designed to encourage and assist in the education of men and women pursuing a career in the field of heating, ventilating, air conditioning and refrigeration (HVAC&R) through its granting of scholarships and fellowships. The program also serves the public interest by aiding in the education of men and women to become qualified to practice as engineers in the HVAC&R field.

For more information and scholarship applications please visit the ASHRAE website at <http://www.ashrae.org>





# CRC ANNOUNCEMENT



## CRC 2008 Denver Colorado August 13<sup>th</sup> 18<sup>th</sup>

Good afternoon ASHRAE Members,

I have been asked to Chair the Convention of Regional Chairs (CRC) here in Denver and for those that have been involved in that process or have attended one of these events know that it takes a lot of effort of the local chapter to make this an enjoyable and successful event.

I am soliciting the general membership to ensure that everyone has an opportunity to participate. The kick off meeting for this will be the second or third week in January. Once I get responses of those interested I will send out a time and place where we will meet to move forward.

This commitment would require monthly meetings for approx an hour over lunch and as the event gets closer we would meet more frequently to ensure that all the details are covered.

Here are a few of the committees that are available so if you are interested in one over the other please inform me of your interest.

Banquet / Hotel Curtis Hotel is the location Banquet details needed  
Companions - Hospitality Room, Sightseeing events, transportation Ensuring that they have a place to meet and events to attend.  
Decorations Gift Baskets, Banners, etc.  
Entertainment Coordinate Events on and off site.  
Finance Budget reconciliation of income and expenses  
Publicity Mailers, Printing, Photography, Interviews, Special Invitations, and other publicity items  
Reception and Registration Welcoming Guest, Registration, Name badges, Pre-Registration, Meeting Venue and Identification Signs.  
Social- Presidents Luncheon, Banquets, Awards Functions, Employers Recognition breakfast  
Technical Programs-Technical Talks, Panel Forums, Technical Tours, - Coordinating these events and speakers.  
Transportation - Coordinate arrival of delegates and ensure adequate transportation is provided for all events.

Please respond via email to [john.d.stumpf@jci.com](mailto:john.d.stumpf@jci.com) for further details or to volunteer to make this the best CRC in decades.



TECH CONFERENCE  
ANNOUNCEMENT  
SEE ATTACHED .PDF







# PRODUCT GUIDE

## ASHRAE/SMACNA COLORADO 2007 HVAC&R MECHANICAL EQUIPMENT & PRODUCT DIRECTORY

Available for purchase in late January for \$45 a copy.

A complete list of available product lines and services makes this directory an invaluable resource! It includes current product and contract information for representatives, distributors, wholesalers, engineers, contractors and other related businesses within the HVAC&R industry.

Look for it at the monthly ASHRAE meeting or contact Ronnie Zimmerman, MKK Consulting Engineers at 303-796-6089 or [rzimmerman@mkkeng.com](mailto:rzimmerman@mkkeng.com).



## MEMBERSHIP PROMOTION



Welcome to December's edition of "The Membership Promotion Page." Please take a close look at the chapter's roster located at [www.rockymtnashrae.com](http://www.rockymtnashrae.com) for the following:

1. If you are a member of ASHRAE (student, associate, member, etc.) your name should be included within the roster.
2. If you have requested that your contact address be your residential address, I have only included your name and the city and state of your residence.
3. If you have requested that your contact address be your business address, I have included your name, the business name and mailing address, and your email address.
4. If a "0" appears where your email address should be, ASHRAE does not have an email address for you assuming your contact address is your business address.
5. Your name appears in the same format ASHRAE has it recorded. I have not attempted to add "Dr", "PE", "PhD" or other pertinent information that ASHRAE does not have.
6. If any of your information is incorrect, or if you want changes made to your information, please send an email to [larry@acemechanical.com](mailto:larry@acemechanical.com) and I will make the requested changes.
7. If you have been omitted from this list and want to know why, please send an email to [larry@acemechanical.com](mailto:larry@acemechanical.com) and I will research why ASHRAE is not including you. Common reasons for omission include human error and unpaid ASHRAE membership dues.





Name: \_\_\_\_\_  
 (Last) (First) (MI)

Status: Renewal \_\_\_\_\_ New Member \_\_\_\_\_ Address Change \_\_\_\_\_

Please circle preferred mailing address:  
 Home Address and Phone

Business Name, Address and Phone

\_\_\_\_\_  
 \_\_\_\_\_

\_\_\_\_\_  
 \_\_\_\_\_

p: \_\_\_\_\_

p: \_\_\_\_\_

Preferred email address: \_\_\_\_\_

Society Membership Number / Grade: \_\_\_\_\_

Name Tag (\$10.00) Paid? Y N

Name to appear on name tag as: \_\_\_\_\_

I would like to be contacted about serving on one of the following committees or functions (Please circle):

- |                       |                                      |
|-----------------------|--------------------------------------|
| A. Newsletter         | H. Research Fund Promotions          |
| B. Membership         | I. Monthly Meeting Programs          |
| C. Meeting Attendance | J. Publicity                         |
| D. Education          | K. Spouse's Night / Social Committee |
| E. Golf               | L. Colorado Engineering Council      |
| F. Chapter Historian  | M. General (Committee Help)          |
| G. Technical Seminars | N. Energy Committee                  |

Please mail this invoice and your check for \$50.00 (2006 / 2007 year) + \$10.00 payable to **Rocky Mountain Chapter ASHRAE** to the address listed below. ASHRAE will invoice you for both society and local dues every year following the first year.

Mr. Lawrence J. Hodgins, PE  
 Rocky Mountain Chapter ASHRAE Membership Promotion Chair  
 13271 Holly Street #F, Thornton CO 80241  
[membership@rockymtnashrae.com](mailto:membership@rockymtnashrae.com) or [larry@acemechanical.com](mailto:larry@acemechanical.com)





# MARCH EMPLOYMENT LISTINGS



Position(s): See Listings Below  
Company: RK Mechanical, Inc.  
Main Phone: 303-355-9696  
Fax: 303-336-5820  
Address: 9300 E. Smith Road, Denver, CO 80126

Contact: KC Ceranich  
Contact Phone: 303-355-9696  
Contact Email: jobs@rkmi.com

## More Info:

RK Mechanical, Inc. is Colorado's largest mechanical contractor. We've been around for over 40 years. We are the sub-contractor of choice for mechanical contracting for large commercial, medical, educational, governmental and industrial projects all over the state. Our growth over the past year has been incredible and it continues with no end in sight. We also have our own on site fabrication facility for all our duct and pipe work. Consider joining this dynamic quality organization.

Level One Pre-Construction Engineer for Large, Dynamic, Mechanical Contractor  
Job Code: L1PCD022007

This individual would fit the following criteria at a minimum:

Ten years in HVAC and Plumbing engineering design with strong estimating skills or ten years pre-construction with a mechanical contracting firm. Strong field experience would be very beneficial. Ideally the successful candidate will be strong in sheet metal, piping and plumbing but two out of three combined with other general strengths would be considered. Ability to communicate well with customers is crucial. Work involves pre-construction engineering and estimating for design-build, design-assist, and plan and spec projects.

\$10,000 signing bonus for the right prospect. Competitive salary and benefit package.

## Requirements:

- Engineering degree and P.E. a plus but not required.
- Field experience, LEED A.P., load calculation skills are all beneficial.

Level Two Pre-Construction Engineer

JobCode: L2PCE20807

Large, dynamic Colorado based mechanical contractor is seeking a Level Two Pre-Construction Engineer.

This individual would fit the following criteria at a minimum:

Three to five years in engineering design with some estimating experience or in pre-construction with a mechanical contracting firm. Ideally the successful candidate will have experience in sheet metal, piping and plumbing but two out of three is acceptable. Ability to communicate well with customers is crucial. Work involves pre-construction engineering and estimating for design-build, design-assist, and plan and spec projects.





# EMPLOYMENT LISTINGS



\$5,000 to \$7,000 signing bonus for the right prospect. Competitive salary and benefit package.  
DFW/EOE m/f/d/v/s

## Requirements:

- Engineering degree and P.E. a plus but not required.
- Field experience, LEED A.P., load calculation skills are all beneficial.

Pre-Construction Engineering Intern

Job Code: PCEI020807

This individual would fit the following criteria at a minimum:

Field experience, sheet metal and/or pipe sizing skills, and load calculation skills are all beneficial. Ability to communicate well with customers is important. Work involves pre-construction engineering and estimating for design-build, design-assist, and plan and spec projects. The successful candidate will be trained as needed and hopefully will return for full time employment upon completion of degree program.

DFW/EOE m/f/d/v/s

## Requirements:

Student enrolled in a mechanical engineering or architectural engineering degree program desired for internship. EIT certificate a plus but not required.

=====  
Position(s): HVAC Project Engineer or Systems Designer  
Company: Innovative Mechanical Systems, Inc.  
Web Site: [www.innovativemechanicalsystems.com](http://www.innovativemechanicalsystems.com)  
Main Phone: 720-890-1080  
Fax: 720-890-1780  
Address: 1500 Cherry Street, Suite A, Louisville, CO 80027

Contact: Bonnie Baas  
Contact Phone: 720-890-1080  
Contact Email: [bonnie@innmechsys.com](mailto:bonnie@innmechsys.com)

## More Info:

Innovative Mechanical Systems, Inc., a Mechanical Design/Build Contractor with in-house engineering department seeks HVAC Project Engineer or Systems Designer. Applicants must be proficient in HVAC systems design including load calculations, equipment selection, hydronic system sizing, mechanical





# EMPLOYMENT LISTINGS



systems layout and drawing coordination. Knowledge of AutoCAD, local codes and a minimum of 5 years experience required; knowledge of Autodesk Building Systems a plus. Excellent salary and benefit package including employer matching 401(k). Send resume to Attn: Engineering, Innovative Mechanical Systems, Inc., 1500 Cherry Street, Suite A, Louisville, CO 80027 or e-mail to [bonnie@innmechsys.com](mailto:bonnie@innmechsys.com)

=====  
Position(s): Mechanical & Electrical Engineers  
Company: MKK Consulting Engineers, Inc.  
Web Site: [www.mkkeng.com](http://www.mkkeng.com)  
Main Phone: 303-796-6000  
Fax: 303-796-6099  
Address: 7600 E. Orchard Road, Suite 250S  
Greenwood Village, CO 80111

Contact: Sheila Jones  
Contact Phone: 303-796-6036  
Contact Email: [sjones@mkkeng.com](mailto:sjones@mkkeng.com)

## More Info:

MKK Consulting Engineers, Inc, a leader in the engineering and design consulting business for over 45 years, specializes in high quality, creative mechanical, electrical, life safety, fire protection, plumbing, and lighting design services for new construction and renovation projects for all types of buildings. We are currently seeking entry level to mid level mechanical engineers. As consultants, our mission is to develop a clear understanding of our clients' needs and recommend solutions to promote their success. MKK offers the professionalism of a mature firm enhanced by broad capabilities and experience with distinct expertise in Healthcare, Education, Institutional, Hospitality/Recreation, Telecommunications, Commercial, and Industrial markets.

=====  
Position(s): Mechanical Engineer  
Company: M-E Engineers, Inc.  
Web Site: [www.me-engineers.com](http://www.me-engineers.com)  
Main Phone: 303-421-6655  
Fax: 303-421-0331  
Address: 10055 W. 43<sup>rd</sup> Ave., Wheat Ridge, CO 80033

Contact: Trish Lovato  
Contact Phone: 720-898-3111  
Contact Email: [tlovato@me-engineers.com](mailto:tlovato@me-engineers.com)

## More Info:

M-E Engineers, Inc. is an international engineering firm seeking Mechanical Engineers to work on sports facilities, laboratories, health care and commercial projects. Preferred candidates should have 3+ years experience in the design of HVAC and plumbing systems. These positions require strong technical abilities, organizational skills and attitude. PE preferred.





# EMPLOYMENT LISTINGS



About M-E Engineers, Inc.: **M-E Engineers, Inc.**, founded in 1981, is a full-service mechanical and electrical consulting engineering firm with an outstanding record in the design of healthcare and laboratories, institutional, sports/entertainment facilities, educational, recreational, arts and culture, commercial, hospitality, and residential. Currently, our firm has a staff of over 240 people and has offices in Denver, CO; Colorado Springs, CO; Vail, CO; Los Angeles, CA; San Diego, CA; New York, NY; Kansas City, MO and London, England.

=====  
Position: Mechanical Engineer  
Company: Geo-Energy Services  
Web Site: [www.geoenergyservices.com](http://www.geoenergyservices.com)  
Main Phone: 303-531-5292  
Fax: 303-805-3563  
Address: 15660 East Hinsdale Drive, Ste 210, Centennial, CO 80112

Contact: Trey Austin  
Contact Phone: 303-531-5292  
Contact Email: [trey@geoenergyservices.com](mailto:trey@geoenergyservices.com)

Geo-Energy Services is a Denver based engineering design firm specializing in ground source heat pump systems. We are currently seeking energized, creative individuals to fulfill the growing demand for our services. If you are interested in working on advanced, integrated HVAC projects, please send your resume to our office. This position will include project development and execution, engineering design, observation of system installations, and system startup.

We are currently interviewing candidates with the following qualifications:  
A Bachelor's Degree in Mechanical Engineering or Architectural Engineering.  
A minimum of 3-5 years experience in mechanical building systems design.  
Experience working with AutoCAD/Autodesk Building Systems.

Additional desired qualifications as applicable:  
Experience with ground source heat pump projects  
PE license  
LEED AP  
Commercial and/or Residential design  
Familiar with TRACE 700  
Familiar with eQUEST  
Other load calculation/energy modeling software







# EMPLOYMENT LISTINGS



Position: Mechanical Engineer, HVAC/Plumbing Designer  
Company: Cator, Ruma & Associates  
Website: [www.catorruma.com](http://www.catorruma.com)  
Main Phone: 303-232-6200  
FAX: 303-233-3701  
Address: 1550 Dover St., Suite 2  
Lakewood, Co 80215  
Contact: send resumes to [cra-resumes@catorruma.com](mailto:cra-resumes@catorruma.com)

## More Information:

Cator, Ruma & Associates is seeking HVAC/Plumbing designer with AutoCAD experience. Some college preferred, and local residents preferred. CRA is a mechanical/electrical engineering firm who has enjoyed 46 years of providing consulting services in a variety of fields including healthcare, telecommunications, governmental, and commercial work. Visit our website at [www.catorruma.com](http://www.catorruma.com).

If you are interested in working on technically challenging HVAC, plumbing and fire-protection design projects, we are interested in discussing career opportunities with you. We are hiring MECHANICAL ENGINEERS/DESIGNERS for new/added positions with experience in mechanical building systems design.

We can offer you an excellent compensation package including a competitive salary, paid major medical, including dental and vision, with flexible spending, 401K, disability and supplemental life, gym membership, generous paid holidays and vacation, flex time and Friday afternoons off.

=====

Position(s): Mechanical Engineer, Electrical Engineer  
Company: Summit MEP Consultants, Inc.  
Web site: [www.summitmep.com](http://www.summitmep.com)  
Phone: 303-904-9585  
Fax: 303-948-2269  
Address: 2750 S. Wadsworth Blvd., Suite D-202, Denver, CO 80227  
Contact: Michael McGraw, Vice President  
Email resume in strictest confidence to [mem@summitmep.com](mailto:mem@summitmep.com)

## Mechanical Engineer

Position requires motivated, degreed engineer with multiple talents including: client development, project management and design of HVAC, plumbing and fire protection. LEED AP certification is a plus. Hiring bonus offered for successful candidate or successful referral.

## Electrical Engineer

Position requires motivated, degreed engineer with multiple talents including: client development, project management and design of power, lighting and fire alarms. Hiring bonus offered for successful candidate or successful referral. PE certification is a plus.







# EMPLOYMENT LISTINGS



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Position: HVAC / Refrigeration Service Technician  
Company: Apex Wine Cellars  
Web Site: [www.apexwinecellars.com](http://www.apexwinecellars.com) , [www.cellartec.com](http://www.cellartec.com)  
Main Phone: (888) 999-9749  
Fax: (425) 486-5323  
Address: 15540 Woodinville Redmond Rd.  
Woodinville, WA 98072

Contact: Cam Nichols  
Contact Phone: (888) 999-9749 x 248  
Contact Email: [camn@groupapex.com](mailto:camn@groupapex.com)

More Info:

**HVAC/REFRIGERATION SERVICE TECHNICIAN**

Apex Wine Cellars is the fastest growing manufacturer of custom designed wine cellar racking in the country. We have an immediate position available for a well qualified HVAC / Refrigeration Technician, holding current City and County of Denver Refrigeration Certificate for our local branch in Littleton, Colorado. This is a fantastic opportunity for the right person to establish themselves with an industry leading national company. The successful candidate must have advanced technical ability including refrigeration piping and controls wiring as well as good communication skills (verbal and written).

Work responsibilities to include installation and service of wine cellar refrigeration systems, ducting, humidifiers and control units.

Competitive compensation and benefit package.

Please e-mail resume including references and CO. D.L info to: [camn@groupapex.com](mailto:camn@groupapex.com).

=====

Position(s): HVAC Sales, inside (1) and outside (1)  
Company: Empire Gas & Electric Equipment  
Web Site: [www.empiregas.com](http://www.empiregas.com)  
Main Phone: 303.623.7747  
Fax: 303.623.5526  
Address: 4900 Osage St. #100; Denver, CO; 80221





# EMPLOYMENT LISTINGS



Contact: Tom Garretson  
Contact Phone: 303.623.7747  
Contact Email: tgarretson@empiregas.com

## More Info:

Candidates should have a minimum of 3 years experience in the HVAC industry with an emphasis on commercial sales. Duties include application and pricing of commercial equipment; calling on specifying engineers, and assisting contractors on design-build projects. Inside sales will also prepare approval documents and administer sales orders. Outside sales will also work with contractors in areas of business development, sales/marketing and technical training. Both positions require strong communication skills. Send resume to 720-931-3496.

Empire Gas, founded in 1947, is a major distributor of HVAC equipment, controls and supplies in the Rocky Mountain region.

Position: Sr. Facilities Engineer  
Company: Raytheon Polar Services Company  
Web Site: [www.rpsc.raytheon.com](http://www.rpsc.raytheon.com)  
Main Phone: 720-568-2094  
Fax: 303-662-8770  
Address: 7400 S. Tucson Way  
Centennial, CO 80112  
Contact: Miranda De Zwarte  
Contact Phone: 720-568-2094  
Contact Email: [Miranda.dezwarte@usap.gov](mailto:Miranda.dezwarte@usap.gov)

## More Info:

Seeking a unique adventure as well as employment? How would you like to be one of the few people on the planet to set foot on the 7<sup>th</sup> continent? Raytheon Polar Services is *the* primary contractor for the National Science Foundation's (NSF) U.S. Antarctic Program. We are seeking a full-time, **Sr. Facilities Engineer (TSC107435)** to work in our Centennial, CO office. This position will *deploy each austral summer (Oct. Feb.) to South Pole Station*.

The Sr. Facilities Engineer will be responsible for engineering investigations of facilities, equipment and operational issues; design, planning and executing small engineering projects as well as defining and budgeting large future maintenance projects for South Pole station in Antarctica. They will also be responsible for conducting facility assessments and code compliance and construction review.

Education: Bachelors Degree in facilities related Engineering discipline or similar field. Mechanical or Electrical Engineering degree preferred.





# EMPLOYMENT LISTINGS



## Required Qualifications:

- Minimum eight years of increasing responsibility in facilities engineering design and maintenance with an emphasis in mechanical and electrical activities.
- Must be highly knowledgeable in building systems to include, HVAC, boilers, furnaces, hydronic heating systems, DDC and thermostatic controls and plumbing and electrical systems.

## Desired Qualifications:

- Basic understanding of energy conservation and fire protection preferred
- Experience in system and project design, specification preparation and review, project scheduling, and project cost estimating is helpful.
- Experience in the development, implementation, and supervision of preventive maintenance and work control systems are highly desirable.
- Knowledge of water purification and power generation facilities is also preferred.
- Experience with/knowledge of chemical, civil and structural engineering preferred.
- Certifications by International Code Council (ICC) in inspection or plan review desirable.
- Professional Engineering registration is preferred.

To find out more about these and other open positions and to apply, please go to [www.RayJobs.com](http://www.RayJobs.com). Click on *Professional Recruiting* and that will get you into the site. If you are a first time user it will be necessary to register, create a profile and login. Once that is done, please search for and pull up the position by entering the corresponding TSC# listed above in the keyword search field click SEARCH. That will pull up that requisition and you can open it up and see a job description. To submit your resume to the position click on SUBMIT NOW in the upper right corner.

=====  
Position: Project Engineer  
Company: Trinity Mechanical, Inc.  
Main Phone: 303.442.3175  
Fax: 303.939.8017  
Address: 3095 Sterling Cir. West #3, Boulder, CO 80301

Contact: Kevin Parrot  
Contact Phone: 303.442.3175  
Contact Email: [Kevinp@Trinity-Mechanical.com](mailto:Kevinp@Trinity-Mechanical.com)

## More Info:

Trinity Mechanical is a Boulder based Design-Build mechanical contractor that performs commercial work along the Front Range. We are looking for a motivated individual to assist our team in all facets of construction from design, project management, estimating, and procurement. The right individual would have a BS in mechanical engineering or equivalent experience, be willing to learn, and be results oriented. Good communication both written and verbal and general computer skills a must. AutoCAD experience a plus.





# EMPLOYMENT LISTINGS



=====  
Position(s): Mechanical Engineer P.E. & Electrical Engineer P.E.  
Company: Shaffer Baucom Engineering & Consulting  
Web Site: sbengr.com  
Main Phone: 303.986.8200  
Fax: 303.986.8222  
Address: 7333 W. Jefferson Ave., Suite 230 Lakewood, CO 80235

Contact: Ellie Dugle  
Contact Phone: 303.986.8200  
Contact Email: edugle@sbengr.com

## More Info:

Shaffer Baucom Engineering & Consulting is a mechanical & electrical consulting firm in Lakewood, CO. Principals of the firm have served owners/clients in the Denver area for over 25 years. The ideal candidate would have a minimum of 7 years experience as a consulting engineer. PE license is required. We have an excellent benefit package. We offer a very competitive salary and bonus program. Please send your resume and references to Ellie Dugle at the above mailing or email address.

=====





# RESEARCH



*Don't wait, please donate for the 2006-2007 calendar year*

Mail Check To:

**ASHRAE RESEARCH**

c/o Big Ass Fans  
10699 Riverbrook Circle  
Littleton, CO 80126

**Your contribution puts us closer to achieving**

our goal. Please send what you can today!

\*Individual contributions of \$100 or more and  
Corporate contributions of \$150 or more  
receive this year's Commemorative Coin  
and Honor Roll Contribution status.

Name: \_\_\_\_\_

Company: \_\_\_\_\_

Address: \_\_\_\_\_

TEL: \_\_\_\_\_

|            |         |          |          |          |
|------------|---------|----------|----------|----------|
| INDIVIDUAL | \$25.00 | \$50.00  | \$75.00  | \$100.00 |
| CORPORATE  | \$75.00 | \$100.00 | \$175.00 | \$250.00 |

Other: \_\_\_\_\_

Other: \_\_\_\_\_

Or call Brian Lynch at 303.346.8955



## ROCKY MOUNTAIN CHAPTER



## FIRST CLASS

Chapter may not act for Society. Expressions, opinions, and comments within this newsletter should not be taken as those of the Chapter or Society.

Rocky Mountain Chapter of ASHRAE  
c/o Ken Urbanek, E.I.T.  
MKK Consulting Engineers, Inc.  
7600 East Orchard Road  
Greenwood Village, CO 80111-2518



# ACTIVITIES CALENDAR



For membership info or change of address contact: Larry Hodgins • Ace Mechanical • [larry@acemechanical.com](mailto:larry@acemechanical.com)

### ASHRAE Events

- |                 |                                                                                                                                                                                                                                                                                        |
|-----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| March 7, 2007   | Rocky Mountain ASHRAE Special Event Improve Your Leadership Skills w/ Victor Goldschmidt - Sheraton Denver West Hotel<br>Rocky Mountain ASHRAE Chapter Meeting Victor Goldschmidt ASHRAE Distinguished Lecturer Differing Perspectives Into Ozone Depletion and Global Warming Wynkoop |
| April 4, 2007   | Rocky Mountain ASHRAE Chapter Meeting Topic T.B.D. Wynkoop                                                                                                                                                                                                                             |
| April 18, 2007  | ASHRAE Satellite Broadcast Indoor Environmental Design: Practical Solutions to Everyday Problems 11:00 a.m. to 2:00 p.m. (MST)                                                                                                                                                         |
| May 2, 2007     | Rocky Mountain ASHRAE Chapter Meeting Topic T.B.D. Wynkoop                                                                                                                                                                                                                             |
| May 18, 2007    | Rocky Mountain ASHRAE Technical Conference Engineering for Sustainability Keynote Speaker Terry Townsend (Society President) Sheraton West Hotel in Lakewood                                                                                                                           |
| August 24, 2007 | Rocky Mountain ASHRAE North Golf Tournament Mariana Butte Golf Course<br>Visit the new Rocky Mountain ASHRAE website:                                                                                                                                                                  |

[www.rockymtnashrae.com](http://www.rockymtnashrae.com)



NEWSLETTER OF THE ROCKY MOUNTAIN CHAPTER  
AMERICAN SOCIETY OF HEATING, REFRIGERATING, AND AIR-CONDITIONING ENGINEERS, INC.

Volume 48, Number 8

APRIL 2007

Editor: Ken Urbanek



## APRIL MEETING



Visit the new Rocky Mountain ASHRAE website: [www.rockymtnashrae.com](http://www.rockymtnashrae.com)

**Date:** April 4, 2007

**Cost:** Rocky Mtn Chapter Members-\$25\*  
\*With Reservations Made Before Monday Noon

**Tour** **NelNet**  
**Location:** 3015 South Parker Rd, Ste 400  
Aurora, CO 80014

Guests, Non-members or Without Reservation - \$30  
Students - \$20

**Dinner** **Crystal Rose**  
**Location:** 9755 East Hampden  
Denver, CO 80231

**RSVP: Justin Dunkin**  
E-mail: [justind@cfmcompany.com](mailto:justind@cfmcompany.com)

**Time:** 4:30 Tour Begins (NelNet)  
5:30 Social Hour (Crystal Rose)  
6:30 Dinner (Crystal Rose)  
7:00 Program Begins (Crystal Rose)



## APRIL PROGRAM



### Tour and Discussion of Computer Room AC Systems

#### Project: Nelnet

Nelnet is one of the leading education and education finance companies in the United States and is focused on providing quality student loan products and services to students and schools nationwide. Nelnet offers a broad range of financial services and technology-based products, including student loan origination, consolidation and lending, holding, student loan and guarantee servicing, and software solutions.

Nelnet recently began upgrading their servers to newer smaller and more powerful blade server technologies. A solution to cool rack loads between 8 and 10 Kw was needed. At the top of Nelnet's list of criteria was reliability. This site has to be up 24/7. Also important was that any water introduced in the room be minimized or eliminated completely; a leak could be catastrophic to their operations. Finally, the cooling systems in place had to be fully redundant, so should one of the systems need to be taken down for maintenance or repair, a backup system was in place.





## APRIL PROGRAM (Con't)



### [Kevin Kuczek](#)

*A C Systems, Sales Rep North of Colfax Avenue.* Kevin joined A C Systems in 1990 and is an expert in the application of critical climate control systems. He is an active participant in [ASHRAE](#), [7x24 Exchange](#), and other industry groups. Kevin holds a Bachelor of Science in Mechanical Engineering from the University of Colorado, Boulder.

### [Randy Poet, PE](#)

*A C Systems, Sales Rep South of Colfax Avenue.* Randy joined A C Systems in 2003. His expertise is in the engineering and commissioning of electrical and mechanical systems for data centers. Prior to joining A C Systems Randy was a project manager at a similar firm on the east coast. Randy is a PE in Colorado and a member of the IEEE. Randy holds a Bachelor of Science in Architectural Engineering from CU in Boulder and a Master of Engineering in Environmental Engineering and Management Science from Stevens Institute of Technology in Hoboken, NJ.



## APRIL RESEARCH PROMOTION



**ASHRAE Society has given The Rocky Mountain Chapter a goal this year to raise \$34,263.00 or \$52.00 per member. Please help support ASHRAE Research.**

This month I will keep it short and simple and note that whatever you invest will almost always come back to you in greater numbers. That has certainly been the case for me, personally.

My mission here is to simply remind you of our cause and to give you a few tips on streamlining the process. Essentially, there are three ways to give. First, simply write a check to ASHRAE Research and I will pick it up personally. Second, make your contribution when you pay your annual dues to Society. Lastly, make your contribution on line at [WWW.ASHRAE.org](http://WWW.ASHRAE.org). It's pretty painless. It's accessible from a link on the left hand side of the home page, and requires your membership and PIN numbers.

If you have given to ASHRAE, since August of 2006, or intend to do so before June of this year, simply email me at [blynch@bigassfans.com](mailto:blynch@bigassfans.com) and keep me posted. It tends to accelerate the record keeping process.

Lastly, special thanks go out to **J.L. Hermon & Associates** for sponsoring last month's Research Raffle prize. They donated a \$50 gift certificate to Best Buy. Dick Scott one the prize and drew the lucky chip to win the pot of \$250, which he then donated back to ASHAE Research!

Thank you,

Brian Lynch  
Resource Promotion, President Elect  
ASHRAE Rocky Mountain Chapter  
[blynch@bigassfans.com](mailto:blynch@bigassfans.com)





# ROCKY MOUNTAIN ROSTER



President .....Kevin Parrot .....KevinP@trinity-mechanical.com

President Elect .....Brian Lynch.....blynch@bigassfans.com

Vice President .....Scott Martin .....smartin@rmhgroup.com

Secretary .....Jeremy Hollands .....jhollands@catorruma.com

Treasurer .....Justin Dunkin .....justind@cfmcompany.com

Newsletter Editor .....Ken Urbanek.....kurbanek@mkkeng.com

Membership .....Larry Hodgins .....larry@acemechanical.com

Refrigeration .....Dave Rodenberg.....drodenberg@long.com

Historian .....Adam Bishop.....adamb@cfmcompany.com

Technology Transfer .....Ken Urbanek.....kurbanek@mkkeng.com

Resource Promotions .....Brian Lynch.....blynch@bigassfans.com

Web Master .....Kyle Manske.....kmanske@comfortsystemsusa.com

Education Chairman .....Kevin Ainsworth .....kainsworth@mcgrath-inc.com

Director .....Mark Jelinske.....mjelinske@catorruma.com

Director .....Kevin Ainsworth .....kainsworth@mcgrath-inc.com

Past President .....John Stumpf .....john.stumpf@york.com





# PRESIDENT'S MESSAGE



Dear Rocky Mountain ASHRAE:

Thank you to everyone who came out for the Leadership Principles seminar last month. I think the general consensus was that the discussion was well put together and presented. Victor did a great job of reviewing leadership principles and framing them in a unique way.

The dinner meeting was well attended. Though most didn't agree with the message Victor presented I think it was good to hear opposing views and a good reminder to not always accept the norm and what you are told. As members of ASHRAE we should all be looking for answers, reasons, and trying to educate those around us. We are working to get a copy of the presentation to put on the website if you would like to investigate further.

Please remember there is a tour this month so we will not be at the Wynkoop. The particulars are list at the beginning of this newsletter. Please RSVP early. We will need to have numbers to the new dinner site early than normal this month.

Lastly, the Technical Conference is quickly approaching. Please block out May 18<sup>th</sup> on your calendar and plan on attending. There is always something for everyone and the national president Terry Townsend will be the keynote speaker at lunch.

Thank you,  
Kevin Parrot  
President, Rocky Mountain Chapter ASHRAE  
[kevinp@trinity-mechanical.com](mailto:kevinp@trinity-mechanical.com)





## The Latest in Technical, Energy, and Government Activities



### Free ASHRAE Satellite Broadcast/Webcast “Indoor Environmental Design: Practical Solutions to Everyday Problems”

April 18, 2007 11:00 A.M. 2:00 P.M. MDT

This broadcast will provide specific solutions to the everyday challenges of achieving indoor environmental quality within real-world budget constraints. The program will benefit designers, building owners, architects and contractors who are faced with the daily engineering challenge of specifying systems that maximize IAQ, thermal comfort and noise control. This FREE program is sponsored by ASHRAE's Chapter Technology Transfer Committee. For complete details, visit our website at [www.ashrae.org/iedbroadcast](http://www.ashrae.org/iedbroadcast).

#### How to Participate

You may host a Satellite Broadcast/Webcast for your colleagues, you may register to view the Satellite Broadcast/Webcast at a local site (see below), or you may register to view the Webcast on you PC.

#### Local Broadcast/Webcast Sites Hosted By Local ASHRAE Sponsor's

I. South Denver Metro Area MKK Consulting Engineers, Inc. 7600 East Orchard Rd. Suite 250S, Greenwood Village, CO (Webcast Site)

As seating is limited please RSVP to Ken Urbanek at [kurbanek@mkkeng.com](mailto:kurbanek@mkkeng.com) by April 16, 2007 with your preferred viewing site. Participants of Local Broadcast Sites are also encouraged to register online.

#### Broadcast Topics

- ☐ “An Overview Perspective on Indoor Environmental Quality” Bill Coad, P.E.
- ☐ “Ventilation Air First, Do No Harm” Lew Harriman
- ☐ “Ventilation System Design Avoiding Three Common Mistakes” Hoy Bohanon Jr., P.E.
- ☐ “Behind the Access Door Advances in Affordable Filtration for IAQ” Chris Muller
- ☐ “Noise, IAQ and Thermal Comfort Can You Have It All?” Dan Int-Hout

#### New National ASHRAE Membership Discount

Non-member participants will be given a \$50 discount for applying for national ASHRAE membership. A special membership application will be available at satellite broadcast sites or by request at 678-539-1139.





# CTTC Technology Con't.



## Registration

Online registration for Satellite Broadcast Site Coordinators and Webcast Participants will begin March 15, 2007, at <http://www.ashrae.org/education>. There is no fee for registration. If you have any questions contact local Chapter Technology Transfer Committee Chair Ken Urbanek via e-mail at [kurbanek@mkkeng.com](mailto:kurbanek@mkkeng.com) or call at 303-796-6000.

### **ASHRAE Technology Awards Many Rocky Mountain Chapter Awards Available**

Each year the Society reviews applications for Technology Awards in seven categories: Commercial Buildings; Institutional Buildings; Health Care Facilities; Industrial Facilities or Processes; Public Assembly; Residential and Alternative or Renewable Energy Use. All categories carry awards for both new and existing buildings in first, second and third place. Many awards are available, including multiple Rocky Mountain Chapter awards, and the Society encourages ASHRAE members to submit any project they have been involved in which demonstrates technological achievements. These awards recognize ASHRAE members who design innovative systems, and communicate the designs to other members as well as building and facility owners.

To apply for an award, fill out the Chapter Technology Award Application (Short Form), available at the monthly meeting or contact CTTC Chair Ken Urbanek at [kurbanek@mkkeng.com](mailto:kurbanek@mkkeng.com) for an application. The awards focus on five criteria: Energy Efficiency; Indoor Air Quality; Innovation; Operation and Maintenance; Cost Effectiveness and Environmental Impact. Not all scoring topics must apply to the project to be considered for an award. Winners in each category will receive a local award and then they will be submitted to the Regional CTTC Vice Chair and can be considered for International awards, or the Engineering Award of Excellence. All applications are due by April 23rd, 2007 and local recipients of the Technology Award will be announced at the final Chapter meeting in May.

If you have any questions regarding Technical, Energy, and Government Activities with respect to ASHRAE please contact local Chapter Technology Transfer Committee Chair Ken Urbanek via e-mail at [kurbanek@mkkeng.com](mailto:kurbanek@mkkeng.com).



## NATIONAL ASHRAE SCHOLARSHIP PROGRAM



The ASHRAE Scholarship Program is designed to encourage and assist in the education of men and women pursuing a career in the field of heating, ventilating, air conditioning and refrigeration (HVAC&R) through its granting of scholarships and fellowships. The program also serves the public interest by aiding in the education of men and women to become qualified to practice as engineers in the HVAC&R field.

For more information and scholarship applications please visit the ASHRAE website at <http://www.ashrae.org>





# CRC ANNOUNCEMENT



## CRC 2008 Denver Colorado August 13<sup>th</sup> 18<sup>th</sup>

Good afternoon ASHRAE Members,

I have been asked to Chair the Convention of Regional Chairs (CRC) here in Denver and for those that have been involved in that process or have attended one of these events know that it takes a lot of effort of the local chapter to make this an enjoyable and successful event.

I am soliciting the general membership to ensure that everyone has an opportunity to participate. The kick off meeting for this will be the second or third week in January. Once I get responses of those interested I will send out a time and place where we will meet to move forward.

This commitment would require monthly meetings for approx an hour over lunch and as the event gets closer we would meet more frequently to ensure that all the details are covered.

Here are a few of the committees that are available so if you are interested in one over the other please inform me of your interest.

Banquet / Hotel Curtis Hotel is the location Banquet details needed  
Companions - Hospitality Room, Sightseeing events, transportation Ensuring that they have a place to meet and events to attend.  
Decorations Gift Baskets, Banners, etc.  
Entertainment Coordinate Events on and off site.  
Finance Budget reconciliation of income and expenses  
Publicity Mailers, Printing, Photography, Interviews, Special Invitations, and other publicity items  
Reception and Registration Welcoming Guest, Registration, Name badges, Pre-Registration, Meeting Venue and Identification Signs.  
Social- Presidents Luncheon, Banquets, Awards Functions, Employers Recognition breakfast  
Technical Programs-Technical Talks, Panel Forums, Technical Tours, - Coordinating these events and speakers.  
Transportation - Coordinate arrival of delegates and ensure adequate transportation is provided for all events.

Please respond via email to [john.d.stumpf@jci.com](mailto:john.d.stumpf@jci.com) for further details or to volunteer to make this the best CRC in decades.



TECH CONFERENCE  
ANNOUNCEMENT  
SEE ATTACHED .PDF







# PRODUCT GUIDE



## ASHRAE/SMACNA COLORADO 2007 HVAC&R MECHANICAL EQUIPMENT & PRODUCT DIRECTORY

Available for purchase for \$45 a copy.

A complete list of available product lines and services makes this directory an invaluable resource! It includes current product and contract information for representatives, distributors, wholesalers, engineers, contractors and other related businesses within the HVAC&R industry.

Look for it at the monthly ASHRAE meeting or contact Ronnie Zimmerman, MKK Consulting Engineers at 303-796-6089 or [rzimmerman@mkkeng.com](mailto:rzimmerman@mkkeng.com).



## MEMBERSHIP PROMOTION



Welcome to "The Membership Promotion Page." Please take a close look at the chapter's roster located at [www.rockymtnashrae.com](http://www.rockymtnashrae.com) for the following:

1. If you are a member of ASHRAE (student, associate, member, etc.) your name should be included within the roster.
2. If you have requested that your contact address be your residential address, I have only included your name and the city and state of your residence.
3. If you have requested that your contact address be your business address, I have included your name, the business name and mailing address, and your email address.
4. If a "0" appears where your email address should be, ASHRAE does not have an email address for you assuming your contact address is your business address.
5. Your name appears in the same format ASHRAE has it recorded. I have not attempted to add "Dr", "PE", "PhD" or other pertinent information that ASHRAE does not have.
6. If any of your information is incorrect, or if you want changes made to your information, please send an email to [larry@acemechanical.com](mailto:larry@acemechanical.com) and I will make the requested changes.
7. If you have been omitted from this list and want to know why, please send an email to [larry@acemechanical.com](mailto:larry@acemechanical.com) and I will research why ASHRAE is not including you. Common reasons for omission include human error and unpaid ASHRAE membership dues.





Name: \_\_\_\_\_  
 (Last) (First) (MI)

Status: Renewal \_\_\_\_\_ New Member \_\_\_\_\_ Address Change \_\_\_\_\_

Please circle preferred mailing address:  
 Home Address and Phone

Business Name, Address and Phone

\_\_\_\_\_  
 \_\_\_\_\_

p: \_\_\_\_\_

p: \_\_\_\_\_

Preferred email address: \_\_\_\_\_

Society Membership Number / Grade: \_\_\_\_\_

Name Tag (\$10.00) Paid? Y N

Name to appear on name tag as: \_\_\_\_\_

I would like to be contacted about serving on one of the following committees or functions (Please circle):

- |                       |                                      |
|-----------------------|--------------------------------------|
| A. Newsletter         | H. Research Fund Promotions          |
| B. Membership         | I. Monthly Meeting Programs          |
| C. Meeting Attendance | J. Publicity                         |
| D. Education          | K. Spouse's Night / Social Committee |
| E. Golf               | L. Colorado Engineering Council      |
| F. Chapter Historian  | M. General (Committee Help)          |
| G. Technical Seminars | N. Energy Committee                  |

Please mail this invoice and your check for \$50.00 (2006 / 2007 year) + \$10.00 payable to **Rocky Mountain Chapter ASHRAE** to the address listed below. ASHRAE will invoice you for both society and local dues every year following the first year.

Mr. Lawrence J. Hodgins, PE  
 Rocky Mountain Chapter ASHRAE Membership Promotion Chair  
 13271 Holly Street #F, Thornton CO 80241  
[membership@rockymtnashrae.com](mailto:membership@rockymtnashrae.com) or [larry@acemechanical.com](mailto:larry@acemechanical.com)





# APRIL EMPLOYMENT LISTINGS



Position(s): Inside Sales Engineer, Outside Sales Engineer  
Company: Ace Mechanical Equipment, Inc.  
Web Site: [www.acemechanical.com](http://www.acemechanical.com)  
Main Phone: 303-526-4550  
Fax: 303-526-5274  
Address: 14818 W. 6<sup>th</sup> Avenue, Unit 17, Golden CO 80401

Contact: Jeff Holland  
Contact Phone: 303-526-4550  
Contact Email: [jeff@acemechanical.com](mailto:jeff@acemechanical.com)

## Inside Sales Position:

Growing manufacturer's representative serving Colorado and Wyoming, looking for enthusiastic Inside Sales Engineer to support sales of applied HVAC equipment. We specialize in custom equipment needing strong interface with the consulting mechanical engineers, including water-and ground-source heat pumps, custom air handling units, heat recovery systems, medical and process chillers, fan coil units. Required qualifications include a good technical background and some experience in the industry. Major responsibilities include support of outside sales, and parts sales and support. Will work with contractors and engineers to support outside salesmen, so good communication and presentation skills are a must. Please forward resume to Jeff Holland via email or fax.

## Outside Sales Position:

Growing manufacturer's representative serving Colorado and Wyoming, looking for enthusiastic Outside Sales Engineer to sell applied HVAC equipment. We specialize in custom equipment needing strong interface with the consulting mechanical engineers, including water-and ground-source heat pumps, custom air handling units, heat recovery systems, medical and process chillers, fan coil units. Required qualifications include engineering degree or equivalent experience, with at least 4 years of experience in our industry. Must have good communication and presentation skills. Please forward resume to Jeff Holland via email or fax

=====  
Position: Entry-level Engineer  
Company: Enermodal Engineering, Inc.  
Web Site: [www.enermodal.com](http://www.enermodal.com)  
Main Phone: 303-861-2070  
Fax: 303-830-2016  
Address: 1554 Emerson Street, Denver, CO 80218

Contact: Susan Reilly  
Contact Phone: 303-861-2070  
Contact Email: [sreilly@enermodal.com](mailto:sreilly@enermodal.com)





# EMPLOYMENT LISTINGS



## More Info:

Enermodal Engineering, Inc. has a position open for a full-time, entry-level engineer. Enermodal consults on sustainable design practices for the built environment and specializes in energy efficiency. We are looking for someone with HVAC coursework, and possibly building energy modeling and daylighting experience. The position will entail using eQuest to model commercial and multi-family buildings, as well as provide technical support on development of the eQuest software. The work will also involve energy audits and commissioning.

Enermodal Engineering is located near downtown Denver. We are a small firm with three engineers and one technical staff person. More information about the firm can be found at [www.enermodal.com](http://www.enermodal.com). If interested, e-mail a resume to [sreilly@enermodal.com](mailto:sreilly@enermodal.com).

=====

Position(s): Mechanical Engineer, Mechanical Designer, Electrical Engineer  
Company: JBA Consulting Engineers  
Web site: [www.jbace.com](http://www.jbace.com)  
Phone: 303-907-4285  
Address: 13952 Denver West Parkway, Suite 250, Lakewood, CO 80401  
Contact: Bryan Moen, P.E.  
Email resume in confidence to [bmoen@jbace.com](mailto:bmoen@jbace.com) for Denver area job openings or [jobs@jbace.com](mailto:jobs@jbace.com) for openings in Las Vegas and Costa Mesa, CA

JBA Consulting Engineers is a multi-discipline national engineering firm specializing in the design and implementation of HVAC, plumbing, electrical, telecommunications, acoustics, audio/visual, life safety, and energy conservation design. JBA Consulting Engineers was founded in 1966 and has provided professional consulting and engineering services for hotels, casinos, educational facilities, judicial facilities, hospitals, major airport expansions, office buildings, retail, and multi-use facilities. JBA Currently has positions available in Denver, Las Vegas, and Costa Mesa, CA and is seeking qualified employees to staff and share in an exciting opportunity to work with a progressive global-minded firm with tremendous growth potential. JBA offers excellent benefits with bonus opportunities available. Salary DOE.

## Mechanical Engineer

Provide design and supervision of design of others for plumbing and HVAC systems. Bachelors Degree in Architectural or Mechanical Engineering from an accredited university or equivalent experience. Proven ability to perform the duties specified with prior project experience at an equivalent level of responsibility. Minimum 3 years experience. PE in Colorado or EIT with ability to obtain PE preferred.

## Mechanical Designer

Provide design for plumbing and HVAC systems. Proven ability to perform the duties specified with prior project experience at an equivalent level of responsibility. Minimum 3 years experience.

## Electrical Engineer

Provide design and supervision of design by others for power and lighting systems. Bachelors Degree in Architectural or Electrical Engineering from an accredited university or equivalent experience. Proven ability to perform the duties specified with prior project experience at an equivalent level of responsibility. Minimum 5 years experience. PE in Colorado or ability to obtain is preferred.





# EMPLOYMENT LISTINGS



## Electrical Designer

Provide design for power and lighting systems. Proven ability to perform the duties specified with prior project experience at an equivalent level of responsibility. Minimum 3 years experience.

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Position(s): See Listings Below  
Company: RK Mechanical, Inc.  
Main Phone: 303-355-9696  
Fax: 303-336-5820  
Address: 9300 E. Smith Road, Denver, CO 80126

Contact: KC Ceranich  
Contact Phone: 303-355-9696  
Contact Email: jobs@rkmi.com

### More Info:

RK Mechanical, Inc. is Colorado's largest mechanical contractor. We've been around for over 40 years. We are the sub-contractor of choice for mechanical contracting for large commercial, medical, educational, governmental and industrial projects all over the state. Our growth over the past year has been incredible and it continues with no end in sight. We also have our own on site fabrication facility for all our duct and pipe work. Consider joining this dynamic quality organization.

## Level One Pre-Construction Engineer Job Code: L1PCD022007

This individual would fit the following criteria at a minimum:

Ten years in HVAC and Plumbing engineering design with strong estimating skills or ten years pre-construction with a mechanical contracting firm. Strong field experience would be very beneficial. Ideally the successful candidate will be strong in sheet metal, piping and plumbing but two out of three combined with other general strengths would be considered. Ability to communicate well with customers is crucial. Work involves pre-construction engineering and estimating for design-build, design-assist, and plan and spec projects.

\$10,000 signing bonus for the right prospect. Competitive salary and benefit package.

### Requirements:

- Engineering degree and P.E. a plus but not required.
- Field experience, LEED A.P., load calculation skills are all beneficial.

## Level Two Pre-Construction Engineer JobCode: L2PCE20807





# EMPLOYMENT LISTINGS



This individual would fit the following criteria at a minimum:

Three to five years in engineering design with some estimating experience or in pre-construction with a mechanical contracting firm. Ideally the successful candidate will have experience in sheet metal, piping and plumbing but two out of three is acceptable. Ability to communicate well with customers is crucial. Work involves pre-construction engineering and estimating for design-build, design-assist, and plan and spec projects.

\$5,000 to \$7,000 signing bonus for the right prospect. Competitive salary and benefit package. DFW/EOE m/f/d/v/s

## Requirements:

- Engineering degree and P.E. a plus but not required.
- Field experience, LEED A.P., load calculation skills are all beneficial.

Pre-Construction Engineering Intern

Job Code: PCEI020807

This individual would fit the following criteria at a minimum:

Field experience, sheet metal and/or pipe sizing skills, and load calculation skills are all beneficial. Ability to communicate well with customers is important. Work involves pre-construction engineering and estimating for design-build, design-assist, and plan and spec projects. The successful candidate will be trained as needed and hopefully will return for full time employment upon completion of degree program.

DFW/EOE m/f/d/v/s

## Requirements:

Student enrolled in a mechanical engineering or architectural engineering degree program desired for internship. EIT certificate a plus but not required.

=====  
Position(s): HVAC Project Engineer or Systems Designer  
Company: Innovative Mechanical Systems, Inc.  
Web Site: [www.innovativemechanicalsystems.com](http://www.innovativemechanicalsystems.com)  
Main Phone: 720-890-1080  
Fax: 720-890-1780  
Address: 1500 Cherry Street, Suite A, Louisville, CO 80027

Contact: Bonnie Baas  
Contact Phone: 720-890-1080  
Contact Email: [bonnie@innmechsys.com](mailto:bonnie@innmechsys.com)







# EMPLOYMENT LISTINGS



## More Info:

Innovative Mechanical Systems, Inc., a Mechanical Design/Build Contractor with in-house engineering department seeks HVAC Project Engineer or Systems Designer. Applicants must be proficient in HVAC systems design including load calculations, equipment selection, hydronic system sizing, mechanical systems layout and drawing coordination. Knowledge of AutoCAD, local codes and a minimum of 5 years experience required; knowledge of Autodesk Building Systems a plus. Excellent salary and benefit package including employer matching 401(k). Send resume to Attn: Engineering, Innovative Mechanical Systems, Inc., 1500 Cherry Street, Suite A, Louisville, CO 80027 or e-mail to [bonnie@innmechsys.com](mailto:bonnie@innmechsys.com)

=====

Position(s): Mechanical & Electrical Engineers  
Company: MKK Consulting Engineers, Inc.  
Web Site: [www.mkkeng.com](http://www.mkkeng.com)  
Main Phone: 303-796-6000  
Fax: 303-796-6099  
Address: 7600 E. Orchard Road, Suite 250S  
Greenwood Village, CO 80111

Contact: Sheila Jones  
Contact Phone: 303-796-6036  
Contact Email: [sjones@mkkeng.com](mailto:sjones@mkkeng.com)

## More Info:

MKK Consulting Engineers, Inc, a leader in the engineering and design consulting business for over 45 years, specializes in high quality, creative mechanical, electrical, life safety, fire protection, plumbing, and lighting design services for new construction and renovation projects for all types of buildings. As consultants, our mission is to develop a clear understanding of our clients' needs and recommend solutions to promote their success. MKK offers the professionalism of a mature firm enhanced by broad capabilities and experience with distinct expertise in Healthcare, Education, Institutional, Hospitality/Recreation, Telecommunications, Commercial, and Industrial markets.

=====

Position(s): Mechanical Engineer  
Company: M-E Engineers, Inc.  
Web Site: [www.me-engineers.com](http://www.me-engineers.com)  
Main Phone: 303-421-6655  
Fax: 303-421-0331  
Address: 10055 W. 43<sup>rd</sup> Ave., Wheat Ridge, CO 80033

Contact: Trish Lovato  
Contact Phone: 720-898-3111  
Contact Email: [tlovato@me-engineers.com](mailto:tlovato@me-engineers.com)







# EMPLOYMENT LISTINGS



## More Info:

M-E Engineers, Inc. is an international engineering firm seeking Mechanical Engineers to work on sports facilities, laboratories, health care and commercial projects. Preferred candidates should have 3+ years experience in the design of HVAC and plumbing systems. These positions require strong technical abilities, organizational skills and attitude. PE preferred.

About M-E Engineers, Inc.: **M-E Engineers, Inc.**, founded in 1981, is a full-service mechanical and electrical consulting engineering firm with an outstanding record in the design of healthcare and laboratories, institutional, sports/entertainment facilities, educational, recreational, arts and culture, commercial, hospitality, and residential. Currently, our firm has a staff of over 240 people and has offices in Denver, CO; Colorado Springs, CO; Vail, CO; Los Angeles, CA; San Diego, CA; New York, NY; Kansas City, MO and London, England.

=====  
Position: Mechanical Engineer  
Company: Geo-Energy Services  
Web Site: [www.geoenergyservices.com](http://www.geoenergyservices.com)  
Main Phone: 303-531-5292  
Fax: 303-805-3563  
Address: 15660 East Hinsdale Drive, Ste 210, Centennial, CO 80112

Contact: Trey Austin  
Contact Phone: 303-531-5292  
Contact Email: [trey@geoenergyservices.com](mailto:trey@geoenergyservices.com)

Geo-Energy Services is a Denver based engineering design firm specializing in ground source heat pump systems. We are currently seeking energized, creative individuals to fulfill the growing demand for our services. If you are interested in working on advanced, integrated HVAC projects, please send your resume to our office. This position will include project development and execution, engineering design, observation of system installations, and system startup.

We are currently interviewing candidates with the following qualifications:

- A Bachelor's Degree in Mechanical Engineering or Architectural Engineering.
- A minimum of 3-5 years experience in mechanical building systems design.
- Experience working with AutoCAD/Autodesk Building Systems.

Additional desired qualifications as applicable:

- Experience with ground source heat pump projects
- PE license
- LEED AP
- Commercial and/or Residential design
- Familiar with TRACE 700
- Familiar with eQUEST
- Other load calculation/energy modeling software





# EMPLOYMENT LISTINGS



=====  
Position: Mechanical Engineer, HVAC/Plumbing Designer  
Company: Cator, Ruma & Associates  
Website: [www.catorruma.com](http://www.catorruma.com)  
Main Phone: 303-232-6200  
FAX: 303-233-3701  
Address: 1550 Dover St., Suite 2  
Lakewood, Co 80215  
Contact: send resumes to [cra-resumes@catorruma.com](mailto:cra-resumes@catorruma.com)

More Information:

Cator, Ruma & Associates is seeking HVAC/Plumbing designer with AutoCAD experience. Some college preferred, and local residents preferred. CRA is a mechanical/electrical engineering firm who has enjoyed 46 years of providing consulting services in a variety of fields including healthcare, telecommunications, governmental, and commercial work. Visit our website at [www.catorruma.com](http://www.catorruma.com).

If you are interested in working on technically challenging HVAC, plumbing and fire-protection design projects, we are interested in discussing career opportunities with you. We are hiring MECHANICAL ENGINEERS/DESIGNERS for new/added positions with experience in mechanical building systems design.

We can offer you an excellent compensation package including a competitive salary, paid major medical, including dental and vision, with flexible spending, 401K, disability and supplemental life, gym membership, generous paid holidays and vacation, flex time and Friday afternoons off.

=====  
Position(s): Mechanical Engineer P.E. & Electrical Engineer P.E.  
Company: Shaffer Baucom Engineering & Consulting  
Web Site: [sbengr.com](http://sbengr.com)  
Main Phone: 303.986.8200  
Fax: 303.986.8222  
Address: 7333 W. Jefferson Ave., Suite 230 Lakewood, CO 80235

Contact: Ellie Dugle  
Contact Phone: 303.986.8200  
Contact Email: [edugle@sbengr.com](mailto:edugle@sbengr.com)

More Info:

Shaffer Baucom Engineering & Consulting is a mechanical & electrical consulting firm in Lakewood, CO. Principals of the firm have served owners/clients in the Denver area for over 25 years. The ideal candidate would have a minimum of 7 years experience as a consulting engineer. PE license is required. We have an excellent benefit package. We offer a very competitive salary and bonus program. Please send your resume and references to Ellie Dugle at the above mailing or email address.





# EMPLOYMENT LISTINGS



=====  
Position(s): Mechanical Engineer, Electrical Engineer  
Company: Summit MEP Consultants, Inc.  
Web site: www.summitmep.com  
Phone: 303-904-9585  
Fax: 303-948-2269  
Address: 2750 S. Wadsworth Blvd., Suite D-202, Denver, CO 80227  
Contact: Michael McGraw, Vice President  
Email resume in strictest confidence to mem@summitmep.com

## Mechanical Engineer

Position requires motivated, degreed engineer with multiple talents including: client development, project management and design of HVAC, plumbing and fire protection. LEED AP certification is a plus. Hiring bonus offered for successful candidate or successful referral.

## Electrical Engineer

Position requires motivated, degreed engineer with multiple talents including: client development, project management and design of power, lighting and fire alarms. Hiring bonus offered for successful candidate or successful referral. PE certification is a plus.

=====





# RESEARCH



*Don't wait, please donate for the 2006-2007 calendar year*

Mail Check To:

**ASHRAE RESEARCH**

c/o Big Ass Fans  
10699 Riverbrook Circle  
Littleton, CO 80126

**Your contribution puts us closer to achieving**

our goal. Please send what you can today!

\*Individual contributions of \$100 or more and  
Corporate contributions of \$150 or more  
receive this year's Commemorative Coin  
and Honor Roll Contribution status.

Name: \_\_\_\_\_

Company: \_\_\_\_\_

Address: \_\_\_\_\_

TEL: \_\_\_\_\_

|            |         |          |          |          |
|------------|---------|----------|----------|----------|
| INDIVIDUAL | \$25.00 | \$50.00  | \$75.00  | \$100.00 |
| CORPORATE  | \$75.00 | \$100.00 | \$175.00 | \$250.00 |

Other: \_\_\_\_\_

Other: \_\_\_\_\_

Or call Brian Lynch at 303.346.8955



## ROCKY MOUNTAIN CHAPTER



## FIRST CLASS

Chapter may not act for Society. Expressions, opinions, and comments within this newsletter should not be taken as those of the Chapter or Society.

Rocky Mountain Chapter of ASHRAE  
c/o Ken Urbanek, E.I.T.  
MKK Consulting Engineers, Inc.  
7600 East Orchard Road  
Greenwood Village, CO 80111-2518



# ACTIVITIES CALENDAR



For membership info or change of address contact: Larry Hodgins • Ace Mechanical • [larry@acemechanical.com](mailto:larry@acemechanical.com)

### ASHRAE Events

|                 |                                                                                                                                                                 |
|-----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| April 4, 2007   | Rocky Mountain ASHRAE Chapter Meeting <b>NelNet Computer Room Tour</b><br>3015 S. Parker Road, Suite 400, Aurora, CO                                            |
| April 18, 2007  | ASHRAE Satellite Broadcast Indoor Environmental Design:<br>Practical Solutions to Everyday Problems 11:00 a.m. to 2:00 p.m. (MST)                               |
| May 2, 2007     | Rocky Mountain ASHRAE Chapter Meeting Topic T.B.D. Wynkoop                                                                                                      |
| May 18, 2007    | Rocky Mountain ASHRAE Technical Conference Engineering for Sustainability<br>Keynote Speaker Terry Townsend (Society President) Sheraton West Hotel in Lakewood |
| June 25, 2007   | Rocky Mountain ASHRAE Golf Tournament Hiwan Golf Course                                                                                                         |
| August 24, 2007 | Rocky Mountain ASHRAE North Golf Tournament Mariana Butte Golf Course                                                                                           |

Visit the new Rocky Mountain ASHRAE website:

[www.rockymtnashrae.com](http://www.rockymtnashrae.com)



NEWSLETTER OF THE ROCKY MOUNTAIN CHAPTER  
AMERICAN SOCIETY OF HEATING, REFRIGERATING, AND AIR-CONDITIONING ENGINEERS, INC.

Volume 48, Number 9

MAY 2007

Editor: Ken Urbanek



## MAY MEETING



Visit the new Rocky Mountain ASHRAE website: [www.rockymtnashrae.com](http://www.rockymtnashrae.com)

**Date:** May 2, 2007

**Cost:** Rocky Mtn Chapter Members-\$25\*  
\*With Reservations Made Before Monday Noon

**Dinner Location:** Wynkoop Brewing Company  
1634 18th St.  
Denver, CO 80202  
(Downtown, Corner of 18<sup>th</sup> & Wynkoop)

Guests, Non-members or Without Reservation - \$30  
Students - \$20

**Time:** 5:30 Social Hour (Wynkoop)  
6:30 Dinner (Wynkoop)  
7:00 Program Begins (Wynkoop)

**RSVP: Justin Dunkin**  
E-mail: [justind@cfmcompany.com](mailto:justind@cfmcompany.com)



## MAY PROGRAM



### Seismic Design Criteria

Larry Gelin will give a presentation regarding the seismic design criteria as it relates to the International Building Code in Colorado. His presentation will include the history and real risk of earthquakes in Colorado, the IBC interpretation and design criteria for that risk, and what you can do as an engineer or supplier to minimize your exposure. Furthermore, he will provide detailed information regarding what to expect from manufacturers of seismic restraints and vibration isolators with regard to risk management.

Larry Gelin holds a BSME from the University of Wisconsin and a MSME from the University of Texas at Austin. He had worked in the HVAC sound and vibration control industry with PACE, Digisonix, and Johns Manville for almost a decade prior to becoming a sales representative in Denver in 2001. Larry has been in outside sales with CFM Company since 2003, and now is the product manager for new and specialty products for CFM Company.



# APRIL RESEARCH PROMOTION



## **2007 Rocky Mountain ASHRAE Technical Conference and Expo: Engineering for Sustainability**

The Rocky Mountain Chapter of ASHRAE is pleased to announce the 15<sup>th</sup> Annual Rocky Mountain ASHRAE Chapter Technical Conference. As Terry Townsend, P.E., 2006-2007 President of ASHRAE believes and stated in his Presidential Address:

***“We are the leaders that the world has been waiting on.  
We are the innovators...”***

This year we are following the lead of ASHRAE Headquarters with a conference theme of ***Engineering for Sustainability***.

***Engineering for Sustainability can be defined as the application of scientific and mathematical principles to meet current practical needs without compromising the ability of future generations to meet their needs.***

Please visit our website, [www.rockymtnashrae.com](http://www.rockymtnashrae.com), to find descriptions of presentations, speaker biographies, and the schedule of topics for this year's Technical Conference.

There is plenty of debate about the reality of our impact on the environment. As Engineers we have the opportunity to act. While there is debate about Global Warming, there is little debate, if any, regarding the rapid depletion of energy sources, increased pollution, and the benefits of energy efficient designs. The aim of this event is to address those topics.

This event has been ongoing for a number of years thanks to the efforts of many dedicated individuals that contribute their time by serving on the conference committee. The Rocky Mountain Chapter would therefore like to express it's gratitude to these individuals and their respective companies.

### **Technical Conference Committee:**

|                                             |                                            |
|---------------------------------------------|--------------------------------------------|
| Trevor Bromberg McGrath, Inc.               | Cay Strother Denver Water                  |
| Mike Fulton - Western Mechanical Solutions  | Peter D'Antonio - PCD Engineering Services |
| David Rodenberg- LONG Building Environments | Jon Rundquist Johnson Controls             |
| Greg Bradshaw- Engineering Economics Inc    | Chris Huff Johnson Controls                |
| Ira Goldschmidt Goldschmidt Engineering     | Larry Hodgins Burch Associates             |
| Dave Kahn The RMH Group                     | Lou Grounds Thermal Exchange Solutions     |
| Scott Martin The RMH Group                  | Mark Labac Edge Mechanical Systems         |
| Bill Mele Indoor Environmental Solutions    | Renée Azerbegi Ambient Energy              |
| Jim Bradburn The RMH Group                  | Kevin Parrot Trinity Mechanical            |
| Tim Junker Johnson Controls                 |                                            |

**We would also like to thank all of our sponsors for this event. Sponsor names will be listed on signage at the conference. Without their support, this conference would not be possible.**

**Thank you,**

**Brian Lynch**  
**Resource Promotion Chair**  
[blynch@bigassfans.com](mailto:blynch@bigassfans.com)







# ROCKY MOUNTAIN ROSTER



President .....Kevin Parrot .....KevinP@trinity-mechanical.com

President Elect .....Brian Lynch.....blynch@bigassfans.com

Vice President .....Scott Martin .....smartin@rmhgroup.com

Secretary .....Jeremy Hollands .....jhollands@catorruma.com

Treasurer .....Justin Dunkin .....justind@cfmcompany.com

Newsletter Editor .....Ken Urbanek.....kurbanek@mkkeng.com

Membership .....Michelle Swanson .....michelle.swanson@me-engineers.com

Refrigeration .....Dave Rodenberg.....drodenberg@long.com

Historian .....Adam Bishop.....adamb@cfmcompany.com

Technology Transfer .....Ken Urbanek.....kurbanek@mkkeng.com

Resource Promotions .....Brian Lynch.....blynch@bigassfans.com

Web Master .....Kyle Manske.....kmanske@comfortsystemsusa.com

Education Chairman .....Kevin Ainsworth .....kainsworth@mcgrath-inc.com

Director .....Mark Jelinske.....mjelinske@catorruma.com

Director .....Kevin Ainsworth .....kainsworth@mcgrath-inc.com





# PRESIDENT'S MESSAGE



Dear Rocky Mountain ASHRAE:

It has been a pleasure serving the ASHRAE community for the last year. I feel it has been a good year with many of the goals set out at the beginning of the year accomplished or on their way to being complete. None of which would have been possible without the great volunteers and especially the Board of Governors. They have put in countless hours over the years and it shows in our great organization.

Here is a summary of just a few of this year's accomplishments:

- Membership is up.
- We had great attendance at our chapter meetings with a nice variety of topics.
- We had a distinguished Lecturer visit and had our first midday training seminar in recent past.
- The Society President will be visiting in May and giving the Keynote presentation at the tech conference.
- We are well on our way to reaching our Research Promotion goal and are further along at this point in the year that we have in the past 2-3 years.
- We have the first Region IX Golden Circle Donor.
- Preparations are well underway for the 2008 CRC with an outstanding volunteer committee.
- The first annual northern golf tournament to benefit ASHRAE research is scheduled for this summer/fall.

In preparation for next year and to keep the momentum going, we will have a Board Member election at the May meeting. If you are interested in running please let me know by Tuesday May 1<sup>st</sup>. Along with a new Board Member, we will welcome a new Membership chair. After many years of service Larry Hodgins is stepping down as from his Chair. He has accepted a position that will relocate him to Phoenix Arizona. We wish him all the best. Michelle Swanson has graciously accepted our invitation and will take the Membership reigns where Larry left off.

I wish only the best for next year and those that follow. The chapter is in good hands with Brian Lynch taking over as President in July and the rest of the Board. Again, thank you for letting me serve you.

Sincerely,  
Kevin Parrot  
President, Rocky Mountain Chapter ASHRAE  
[kevinp@trinity-mechanical.com](mailto:kevinp@trinity-mechanical.com)





## The Latest in Technical, Energy, and Government Activities



### ASHRAE, ACCA Publish Load Calculation Standard

ATLANTA A new standard that establishes minimum requirements for performing load calculations has been published by the American Society of Heating, Refrigerating and Air-Conditioning Engineers. The standard was developed in conjunction with the Air Conditioning Contractors of America (ACCA).

A NSI/ASHRAE/ACCA Standard 183-2007, Peak Cooling and Heating Load Calculations in Buildings Except Low-Rise Residential Buildings, is available for purchase at [www.ashrae.org/bookstore](http://www.ashrae.org/bookstore).

Proper load calculations are the first step in any design process, says Chris Wilkins, chair of the committee that wrote the standard. "Efficiency and comfort are only possible if the equipment is selected to match the load."

The standard establishes minimum requirements for building loads that are inclusive of as many procedural methods as possible while identifying core elements that impact heat loss and gains. Requirements are non-prescriptive and are aimed at ensuring that developers of load calculation methodologies observe recognized good practices. The specifics in undertaking a load are left to the discretion of the industry professional by their selection and application of load methodologies that meet the standard.

The need for the standard was driven largely by the desire of the code enforcement community. Code references to the ASHRAE Handbook existed, making it the de facto standard.

### ASHRAE Grants: Student Studies Impact of Noise Levels on Design

ATLANTA Research to determine if new standards should be implemented for background noise levels in design of spaces for hearing-impaired people is being funded by ASHRAE.

Nineteen students will receive a total of \$173,000 through ASHRAE's grants-in-aid program, which is designed to encourage students to continue their education in preparation for service in the HVAC&R industry. The grants are awarded to full-time graduate students of ASHRAE-related technologies.

Grant recipient Lauren Ronsse, University of Nebraska, Lincoln, currently is studying whether people with hearing impairments respond similarly as people with no impairments to seven mechanical system background noise conditions. The proposed research is a continuation of that study including more people and different types of noise signals.

Ronsse will investigate productivity and subjective perceptions of people exposed to mechanical system background noise. Results of the research may lead to development of different standards for noise criteria levels for spaces designed for the hearing-impaired.

If you have any questions regarding Technical, Energy, and Government Activities with respect to ASHRAE please contact local Chapter Technology Transfer Committee Chair Ken Urbanek via e-mail at [kurbanek@mkkeng.com](mailto:kurbanek@mkkeng.com).



# NATIONAL ASHRAE SCHOLARSHIP PROGRAM



## NATIONAL ASHRAE SCHOLARSHIP PROGRAM

The ASHRAE Scholarship Program is designed to encourage and assist in the education of men and women pursuing a career in the field of heating, ventilating, air conditioning and refrigeration (HVAC&R) through its granting of scholarships and fellowships. The program also serves the public interest by aiding in the education of men and women to become qualified to practice as engineers in the HVAC&R field.

For more information and scholarship applications please visit the ASHRAE website at <http://www.ashrae.org>



## ASHRAE HISTORY



Though earthquakes have always existed, the codifying of accepted design criteria is a fairly new process, one that evolved slowly over the twentieth century and one that continues to evolve today. The first American building code that addressed earthquake resistance was adopted by the City of San Francisco for reconstruction following the disaster of 1906. The code required a design wind load of 30 pounds per square foot, and was used to address both wind loads and earthquakes. The first seismic design provisions in American building codes were published in the 1927 edition of the UBC but were not mandatory. Various upgrades and improvements took place over time until around 1960, when the State of California adopted the first statewide code that appeared in the UBC.

Until 1971, no specific treatment was given to vibration-isolated or flexibly-supported equipment. The San Fernando earthquake of 1971 was the first to occur in an area where mechanical systems were similar to those installed in the present day. Since the natural frequency of vibration isolation springs is quite close to the driving frequency of the earthquake, the earthquake forces caused equipment to oscillate freely, and the results were devastating. Since then, codes have continually been updated and upgraded to minimize the risk of overturning or falling equipment, broken pipes and duct, in order to provide insurance against catastrophic failure of mechanical systems.

The evolution of code requirements led to a far more critical requirement in the IBC 2003, wherein the code became far more prescriptive and seismic restraint systems were no longer optional for buildings that met a specific set of circumstances. The IBC 2006 codes have now added further wind load requirements.

Many restraint systems have in part been “borrowed” from lessons learned during the cold war, when the military wanted to isolate and protect equipment in critical areas. Manufacturers of these restraint systems maintain in-house engineering staffs that provide “contractor-designed” restraint systems specific to individual pieces of equipment, piping, and duct





# CRC ANNOUNCEMENT



## CRC 2008 Denver Colorado August 13<sup>th</sup> 18<sup>th</sup>

Good afternoon ASHRAE Members,

I have been asked to Chair the Convention of Regional Chairs (CRC) here in Denver and for those that have been involved in that process or have attended one of these events know that it takes a lot of effort of the local chapter to make this an enjoyable and successful event.

I am soliciting the general membership to ensure that everyone has an opportunity to participate. The kick off meeting for this will be the second or third week in January. Once I get responses of those interested I will send out a time and place where we will meet to move forward.

This commitment would require monthly meetings for approx an hour over lunch and as the event gets closer we would meet more frequently to ensure that all the details are covered.

Here are a few of the committees that are available so if you are interested in one over the other please inform me of your interest.

Banquet / Hotel Curtis Hotel is the location Banquet details needed

Companions - Hospitality Room, Sightseeing events, transportation Ensuring that they have a place to meet and events to attend.

Decorations Gift Baskets, Banners, etc.

Entertainment Coordinate Events on and off site.

Finance Budget reconciliation of income and expenses

Publicity Mailers, Printing, Photography, Interviews, Special Invitations, and other publicity items

Reception and Registration Welcoming Guest, Registration, Name badges, Pre-Registration, Meeting Venue and Identification Signs.

Social- Presidents Luncheon, Banquets, Awards Functions, Employers Recognition breakfast  
Technical Programs-Technical Talks, Panel Forums, Technical Tours, - Coordinating these events and speakers.

Transportation - Coordinate arrival of delegates and ensure adequate transportation is provided for all events.

Please respond via email to [john.d.stumpf@jci.com](mailto:john.d.stumpf@jci.com) for further details or to volunteer to make this the best CRC in decades.



TECH CONFERENCE  
ANNOUNCEMENT  
SEE ATTACHED .PDF





# MEMBERSHIP PROMOTION



Welcome to "The Membership Promotion Page." Please take a close look at the chapter's roster located at [www.rockymtnashrae.com](http://www.rockymtnashrae.com) for the following:

1. If you are a member of ASHRAE (student, associate, member, etc.) your name should be included within the roster.
2. If you have requested that your contact address be your residential address, I have only included your name and the city and state of your residence.
3. If you have requested that your contact address be your business address, I have included your name, the business name and mailing address, and your email address.
4. If a "0" appears where your email address should be, ASHRAE does not have an email address for you assuming your contact address is your business address.
5. Your name appears in the same format ASHRAE has it recorded. I have not attempted to add "Dr", "PE", "PhD" or other pertinent information that ASHRAE does not have.
6. If any of your information is incorrect, or if you want changes made to your information, please send an email to [michelle.swanson@me-engineers.com](mailto:michelle.swanson@me-engineers.com) and I will make the requested changes.
7. If you have been omitted from this list and want to know why, please send an email to [michelle.swanson@me-engineers.com](mailto:michelle.swanson@me-engineers.com) and I will research why ASHRAE is not including you. Common reasons for omission include human error and unpaid ASHRAE membership dues.



## PRODUCT GUIDE



### **ASHRAE/SMACNA COLORADO 2007 HVAC&R MECHANICAL EQUIPMENT & PRODUCT DIRECTORY**

Available for purchase for \$45 a copy.

A complete list of available product lines and services makes this directory an invaluable resource! It includes current product and contract information for representatives, distributors, wholesalers, engineers, contractors and other related businesses within the HVAC&R industry.

Look for it at the monthly ASHRAE meeting or contact Ronnie Zimmerman, MKK Consulting Engineers at 303-796-6089 or [rzimmerman@mkkeng.com](mailto:rzimmerman@mkkeng.com).







Name: \_\_\_\_\_  
 (Last) (First) (MI)

Status: Renewal \_\_\_\_\_ New Member \_\_\_\_\_ Address Change \_\_\_\_\_

Please circle preferred mailing address:  
 Home Address and Phone

Business Name, Address and Phone

\_\_\_\_\_  
 \_\_\_\_\_

\_\_\_\_\_  
 \_\_\_\_\_

p: \_\_\_\_\_

p: \_\_\_\_\_

Preferred email address: \_\_\_\_\_

Society Membership Number / Grade: \_\_\_\_\_

Name Tag (\$10.00) Paid? Y N

Name to appear on name tag as: \_\_\_\_\_

I would like to be contacted about serving on one of the following committees or functions (Please circle):

- |                       |                                      |
|-----------------------|--------------------------------------|
| A. Newsletter         | H. Research Fund Promotions          |
| B. Membership         | I. Monthly Meeting Programs          |
| C. Meeting Attendance | J. Publicity                         |
| D. Education          | K. Spouse's Night / Social Committee |
| E. Golf               | L. Colorado Engineering Council      |
| F. Chapter Historian  | M. General (Committee Help)          |
| G. Technical Seminars | N. Energy Committee                  |

Please mail this invoice and your check for \$50.00 (2006 / 2007 year) + \$10.00 payable to **Rocky Mountain Chapter ASHRAE** to the address listed below. ASHRAE will invoice you for both society and local dues every year following the first year.

Michelle Swanson  
 Rocky Mountain Chapter ASHRAE Membership Promotion Chair  
 10055 W. 43rd Ave., Wheat Ridge, CO 80033  
[membership@rockymtnashrae.com](mailto:membership@rockymtnashrae.com) or [michelle.swanson@me-engineers.com](mailto:michelle.swanson@me-engineers.com)





# MAY EMPLOYMENT LISTINGS



Position(s): various  
Company: Murphy Company  
Web Site: [www.murphynet.com](http://www.murphynet.com)  
Main Phone: 303-371-6600  
Fax: 303-371-6616  
Address: 3790 Wheeling Street, Denver CO 80239

Contact: Human Resources  
Contact Email: [denverjobs@murphy-den.com](mailto:denverjobs@murphy-den.com)

## Company Info:

Founded in 1907, Murphy Company performs construction and engineering work in the industrial, commercial, municipal and institutional construction and service markets. Murphy Company is licensed in 32 states and has performed work in 25 states. Murphy has set the standard for mechanical and industrial construction and engineering earning the distinction of being ranked 10th largest mechanical specialty contracting firm in the 2006 ENR/Engineering News-Record.

This is an opportunity to join a dynamic, growth-oriented company that offers a highly competitive compensation and excellent benefits package, along with opportunities for personal and professional development. For immediate consideration, please forward your resume and salary expectations via fax 303-371-6616 or email to [denverjobs@murphy-den.com](mailto:denverjobs@murphy-den.com). EOE

## **Energy Engineer**

Perform detailed building audits of MEP systems. Technical expert at identifying and quantifying energy and water conservation measures. Develop costs to implement measures, calculate energy baselines, estimate utility and maintenance savings. Will complete life cycle cost analysis, prepare and present proposals, assist project managers in implementation of recommendations. Engineering degree with 5-7 years experience in the energy management field related to electrical or HVAC systems, CEM certificate required. Controls system and lighting retrofit experience preferred.

## **Design Build Engineer**

Design-Build Engineer with experience at HVAC & Plumbing construction document production including calculations, layout, coordinate with other disciplines to include CAD drafting, survey of existing conditions and completion of construction drawings. The candidate should be interested in improving their understanding of the construction cost, constructability, and schedule implications of different design choices.

Bachelors of Science Engineering Degree and Colorado PE License required. Minimum of 10 years design experience and prior construction experience a plus.

## **Junior-level Design Build Engineer**

Individual who wants to learn about the construction industry while gaining practical work. Candidate will gain experience in HVAC & Plumbing construction document production including calculations, layout, coordinate with other disciplines to include CAD drafting, survey of existing conditions and completion of construction drawings. Candidate should be interested in improving their understanding of the construction cost, constructability and schedule implications of different design choices. Must have a bachelor degree in engineering. EIT certification a plus.





# EMPLOYMENT LISTINGS



## **Project Management Administrative Assistant**

Provide administrative support for various Project Managers. Duties include preparation of monthly billings, organize luncheons, assemble special projects, copying of drawings and specifications, word processing, maintaining spreadsheets, filing and assist with front desk phone coverage. Must have basic understanding of the construction industry and demonstrate working knowledge of Microsoft Office software. Must be able to take direction and work with little supervision, flexible, detail-oriented and able to multi-task; dependable, reliable with stable work history.

## **Mechanical Estimator**

The Mechanical estimator must have experience in HVAC Piping, HVAC Sheet Metal and Plumbing and must be able to obtain and read drawings and specifications, compile an accurate take-off and summary of labor, materials, and equipment. Must be able to prepare proposals, operate computerized estimating software programs and work effectively with general contractors, owners, project managers. Knowledge of EEO and Affirmative action guidelines as pertains to the bid process is required.

## **Quick Response Project Manager**

Candidate sought to manage overall job progress; conduct safety audits, evaluate hazard potentials on project, organize safety orientations, and distribute safety information; plus develop and maintain client relationships. College degree preferred, along with ability to use MS Office and QuickPen Estimating System. Understanding of sheet metal, HVAC, piping, plumbing and refrigeration systems required. Understanding and ability to perform conceptual design and layout of HVAC and plumbing systems also required

## **Senior Project Manager**

Candidate must demonstrate leadership in the area of safety performance, have achieved a level of experience above and beyond that of a typical Project Manager, must be proficient in the understanding, accuracy, and timely completion of job cost forecasting, can be assigned responsibilities regardless of size and/or type of project, has the ability to develop and cultivate close client relationships, displays a high level of professionalism and actively participates in industry organizations.

## **Quick Response Group Manager**

The Quick Response Group Manager must demonstrate leadership in safety performance and quality. Responsible for the projects and Project Managers in the QR group, including group financial responsibility. Must be proficient in the understanding, accuracy, and timely completion of job cost and group forecasting, have the ability to develop and cultivate close client relationships, displays a high level of professionalism, and actively participate in industry organizations. Bachelors of Science in Construction Management/Mechanical degree preferred.

## **Service Sales Representative**

Individual is responsible for the new project management contract sales, account management, sales within accounts assigned. Candidate must be dependable and responsible individual who can take direction and work with little supervision; personable, poised, mature and well spoken. Must have excellent verbal and written communication skills; flexible, detail-oriented, able to multi-task, and maintain confidentiality. Individual should demonstrate a working knowledge of Microsoft office software and be customer focused and sales driven with 5-years sales experience.





# EMPLOYMENT LISTINGS



=====  
Position(s): Inside Sales Engineer, Outside Sales Engineer  
Company: Ace Mechanical Equipment, Inc.  
Web Site: [www.acemechanical.com](http://www.acemechanical.com)  
Main Phone: 303-526-4550  
Fax: 303-526-5274  
Address: 14818 W. 6<sup>th</sup> Avenue, Unit 17, Golden CO 80401

Contact: Jeff Holland  
Contact Phone: 303-526-4550  
Contact Email: [jeff@acemechanical.com](mailto:jeff@acemechanical.com)

## Inside Sales Position:

Growing manufacturer's representative serving Colorado and Wyoming, looking for enthusiastic Inside Sales Engineer to support sales of applied HVAC equipment. We specialize in custom equipment needing strong interface with the consulting mechanical engineers, including water-and ground-source heat pumps, custom air handling units, heat recovery systems, medical and process chillers, fan coil units. Required qualifications include a good technical background and some experience in the industry. Major responsibilities include support of outside sales, and parts sales and support. Will work with contractors and engineers to support outside salesmen, so good communication and presentation skills are a must. Please forward resume to Jeff Holland via email or fax.

## Outside Sales Position:

Growing manufacturer's representative serving Colorado and Wyoming, looking for enthusiastic Outside Sales Engineer to sell applied HVAC equipment. We specialize in custom equipment needing strong interface with the consulting mechanical engineers, including water-and ground-source heat pumps, custom air handling units, heat recovery systems, medical and process chillers, fan coil units. Required qualifications include engineering degree or equivalent experience, with at least 4 years of experience in our industry. Must have good communication and presentation skills. Please forward resume to Jeff Holland via email or fax

=====  
Position: Entry-level Engineer  
Company: Enermodal Engineering, Inc.  
Web Site: [www.enermodal.com](http://www.enermodal.com)  
Main Phone: 303-861-2070  
Fax: 303-830-2016  
Address: 1554 Emerson Street, Denver, CO 80218

Contact: Susan Reilly  
Contact Phone: 303-861-2070  
Contact Email: [sreilly@enermodal.com](mailto:sreilly@enermodal.com)





# EMPLOYMENT LISTINGS



## More Info:

Enermodal Engineering, Inc. has a position open for a full-time, entry-level engineer. Enermodal consults on sustainable design practices for the built environment and specializes in energy efficiency. We are looking for someone with HVAC coursework, and possibly building energy modeling and daylighting experience. The position will entail using eQuest to model commercial and multi-family buildings, as well as provide technical support on development of the eQuest software. The work will also involve energy audits and commissioning.

Enermodal Engineering is located near downtown Denver. We are a small firm with three engineers and one technical staff person. More information about the firm can be found at [www.enermodal.com](http://www.enermodal.com). If interested, e-mail a resume to [sreilly@enermodal.com](mailto:sreilly@enermodal.com).

=====  
Position(s): Mechanical Engineer, Mechanical Designer, Electrical Engineer  
Company: JBA Consulting Engineers  
Web site: [www.jbace.com](http://www.jbace.com)  
Phone: 303-907-4285  
Address: 13952 Denver West Parkway, Suite 250, Lakewood, CO 80401  
Contact: Bryan Moen, P.E.  
Email resume in confidence to [bmoen@jbace.com](mailto:bmoen@jbace.com) for Denver area job openings or [jobs@jbace.com](mailto:jobs@jbace.com) for openings in Las Vegas and Costa Mesa, CA

JBA Consulting Engineers is a multi-discipline national engineering firm specializing in the design and implementation of HVAC, plumbing, electrical, telecommunications, acoustics, audio/visual, life safety, and energy conservation design. JBA Consulting Engineers was founded in 1966 and has provided professional consulting and engineering services for hotels, casinos, educational facilities, judicial facilities, hospitals, major airport expansions, office buildings, retail, and multi-use facilities. JBA Currently has positions available in Denver, Las Vegas, and Costa Mesa, CA and is seeking qualified employees to staff and share in an exciting opportunity to work with a progressive global-minded firm with tremendous growth potential. JBA offers excellent benefits with bonus opportunities available. Salary DOE.

## Mechanical Engineer

Provide design and supervision of design of others for plumbing and HVAC systems. Bachelors Degree in Architectural or Mechanical Engineering from an accredited university or equivalent experience. Proven ability to perform the duties specified with prior project experience at an equivalent level of responsibility. Minimum 3 years experience. PE in Colorado or EIT with ability to obtain PE preferred.

## Mechanical Designer

Provide design for plumbing and HVAC systems. Proven ability to perform the duties specified with prior project experience at an equivalent level of responsibility. Minimum 3 years experience.





# EMPLOYMENT LISTINGS



## Electrical Engineer

Provide design and supervision of design by others for power and lighting systems. Bachelors Degree in Architectural or Electrical Engineering from an accredited university or equivalent experience. Proven ability to perform the duties specified with prior project experience at an equivalent level of responsibility. Minimum 5 years experience. PE in Colorado or ability to obtain is preferred.

## Electrical Designer

Provide design for power and lighting systems. Proven ability to perform the duties specified with prior project experience at an equivalent level of responsibility. Minimum 3 years experience.

=====

Position(s): See Listings Below  
Company: RK Mechanical, Inc.  
Main Phone: 303-355-9696  
Fax: 303-336-5820  
Address: 9300 E. Smith Road, Denver, CO 80126

Contact: KC Ceranich  
Contact Phone: 303-355-9696  
Contact Email: jobs@rkmi.com

## More Info:

RK Mechanical, Inc. is Colorado's largest mechanical contractor. We've been around for over 40 years. We are the sub-contractor of choice for mechanical contracting for large commercial, medical, educational, governmental and industrial projects all over the state. Our growth over the past year has been incredible and it continues with no end in sight. We also have our own on site fabrication facility for all our duct and pipe work. Consider joining this dynamic quality organization.

## Level One Pre-Construction Engineer Job Code: L1PCD022007

This individual would fit the following criteria at a minimum:

Ten years in HVAC and Plumbing engineering design with strong estimating skills or ten years pre-construction with a mechanical contracting firm. Strong field experience would be very beneficial. Ideally the successful candidate will be strong in sheet metal, piping and plumbing but two out of three combined with other general strengths would be considered. Ability to communicate well with customers is crucial. Work involves pre-construction engineering and estimating for design-build, design-assist, and plan and spec projects.

\$10,000 signing bonus for the right prospect. Competitive salary and benefit package.







# EMPLOYMENT LISTINGS



## Requirements:

- Engineering degree and P.E. a plus but not required.
- Field experience, LEED A.P., load calculation skills are all beneficial.

## Level Two Pre-Construction Engineer

JobCode: L2PCE20807

This individual would fit the following criteria at a minimum:

Three to five years in engineering design with some estimating experience or in pre-construction with a mechanical contracting firm. Ideally the successful candidate will have experience in sheet metal, piping and plumbing but two out of three is acceptable. Ability to communicate well with customers is crucial. Work involves pre-construction engineering and estimating for design-build, design-assist, and plan and spec projects.

\$5,000 to \$7,000 signing bonus for the right prospect. Competitive salary and benefit package.  
DFW/EOE m/f/d/v/s

## Requirements:

- Engineering degree and P.E. a plus but not required.
- Field experience, LEED A.P., load calculation skills are all beneficial.

## Pre-Construction Engineering Intern

Job Code: PCEI020807

This individual would fit the following criteria at a minimum:

Field experience, sheet metal and/or pipe sizing skills, and load calculation skills are all beneficial. Ability to communicate well with customers is important. Work involves pre-construction engineering and estimating for design-build, design-assist, and plan and spec projects. The successful candidate will be trained as needed and hopefully will return for full time employment upon completion of degree program.

DFW/EOE m/f/d/v/s

## Requirements:

Student enrolled in a mechanical engineering or architectural engineering degree program desired for internship. EIT certificate a plus but not required.

=====  
Position(s): HVAC Project Engineer or Systems Designer  
Company: Innovative Mechanical Systems, Inc.  
Web Site: [www.innovativemechanicalsystems.com](http://www.innovativemechanicalsystems.com)  
Main Phone: 720-890-1080  
Fax: 720-890-1780  
Address: 1500 Cherry Street, Suite A, Louisville, CO 80027







# EMPLOYMENT LISTINGS



Contact: Bonnie Baas  
Contact Phone: 720-890-1080  
Contact Email: [bonnie@innmechsys.com](mailto:bonnie@innmechsys.com)

## More Info:

Innovative Mechanical Systems, Inc., a Mechanical Design/Build Contractor with in-house engineering department seeks HVAC Project Engineer or Systems Designer. Applicants must be proficient in HVAC systems design including load calculations, equipment selection, hydronic system sizing, mechanical systems layout and drawing coordination. Knowledge of AutoCAD, local codes and a minimum of 5 years experience required; knowledge of Autodesk Building Systems a plus. Excellent salary and benefit package including employer matching 401(k). Send resume to Attn: Engineering, Innovative Mechanical Systems, Inc., 1500 Cherry Street, Suite A, Louisville, CO 80027 or e-mail to [bonnie@innmechsys.com](mailto:bonnie@innmechsys.com)

=====  
Position(s): Mechanical & Electrical Engineers  
Company: MKK Consulting Engineers, Inc.  
Web Site: [www.mkkeng.com](http://www.mkkeng.com)  
Main Phone: 303-796-6000  
Fax: 303-796-6099  
Address: 7600 E. Orchard Road, Suite 250S  
Greenwood Village, CO 80111

Contact: Sheila Jones  
Contact Phone: 303-796-6036  
Contact Email: [sjones@mkkeng.com](mailto:sjones@mkkeng.com)

## More Info:

MKK Consulting Engineers, Inc, a leader in the engineering and design consulting business for over 45 years, specializes in high quality, creative mechanical, electrical, life safety, fire protection, plumbing, and lighting design services for new construction and renovation projects for all types of buildings. As consultants, our mission is to develop a clear understanding of our clients' needs and recommend solutions to promote their success. MKK offers the professionalism of a mature firm enhanced by broad capabilities and experience with distinct expertise in Healthcare, Education, Institutional, Hospitality/Recreation, Telecommunications, Commercial, and Industrial markets.

=====  
Position(s): Mechanical Engineer  
Company: M-E Engineers, Inc.  
Web Site: [www.me-engineers.com](http://www.me-engineers.com)  
Main Phone: 303-421-6655  
Fax: 303-421-0331  
Address: 10055 W. 43<sup>rd</sup> Ave., Wheat Ridge, CO 80033





# EMPLOYMENT LISTINGS



Contact: Trish Lovato  
Contact Phone: 720-898-3111  
Contact Email: [tlovato@me-engineers.com](mailto:tlovato@me-engineers.com)

## More Info:

M-E Engineers, Inc. is an international engineering firm seeking Mechanical Engineers to work on sports facilities, laboratories, health care and commercial projects. Preferred candidates should have 3+ years experience in the design of HVAC and plumbing systems. These positions require strong technical abilities, organizational skills and attitude. PE preferred.

About M-E Engineers, Inc.: **M-E Engineers, Inc.**, founded in 1981, is a full-service mechanical and electrical consulting engineering firm with an outstanding record in the design of healthcare and laboratories, institutional, sports/entertainment facilities, educational, recreational, arts and culture, commercial, hospitality, and residential. Currently, our firm has a staff of over 240 people and has offices in Denver, CO; Colorado Springs, CO; Vail, CO; Los Angeles, CA; San Diego, CA; New York, NY; Kansas City, MO and London, England.

=====  
Position: Mechanical Engineer  
Company: Geo-Energy Services  
Web Site: [www.geoenergyservices.com](http://www.geoenergyservices.com)  
Main Phone: 303-531-5292  
Fax: 303-805-3563  
Address: 15660 East Hinsdale Drive, Ste 210, Centennial, CO 80112

Contact: Trey Austin  
Contact Phone: 303-531-5292  
Contact Email: [trey@geoenergyservices.com](mailto:trey@geoenergyservices.com)

Geo-Energy Services is a Denver based engineering design firm specializing in ground source heat pump systems. We are currently seeking energized, creative individuals to fulfill the growing demand for our services. If you are interested in working on advanced, integrated HVAC projects, please send your resume to our office. This position will include project development and execution, engineering design, observation of system installations, and system startup.

We are currently interviewing candidates with the following qualifications:  
A Bachelor's Degree in Mechanical Engineering or Architectural Engineering.  
A minimum of 3-5 years experience in mechanical building systems design.  
Experience working with AutoCAD/Autodesk Building Systems.





# EMPLOYMENT LISTINGS



Additional desired qualifications as applicable:

Experience with ground source heat pump projects

PE license

LEED AP

Commercial and/or Residential design

Familiar with TRACE 700

Familiar with eQUEST

Other load calculation/energy modeling software

=====  
Position: Mechanical Engineer, HVAC/Plumbing Designer  
Company: Cator, Ruma & Associates  
Website: [www.catorruma.com](http://www.catorruma.com)  
Main Phone: 303-232-6200  
FAX: 303-233-3701  
Address: 1550 Dover St., Suite 2  
Lakewood, Co 80215  
Contact: send resumes to [cra-resumes@catorruma.com](mailto:cra-resumes@catorruma.com)

## More Information:

Cator, Ruma & Associates is seeking HVAC/Plumbing designer with AutoCAD experience. Some college preferred, and local residents preferred. CRA is a mechanical/electrical engineering firm who has enjoyed 46 years of providing consulting services in a variety of fields including healthcare, telecommunications, governmental, and commercial work. Visit our website at [www.catorruma.com](http://www.catorruma.com).

If you are interested in working on technically challenging HVAC, plumbing and fire-protection design projects, we are interested in discussing career opportunities with you. We are hiring MECHANICAL ENGINEERS/DESIGNERS for new/added positions with experience in mechanical building systems design.

We can offer you an excellent compensation package including a competitive salary, paid major medical, including dental and vision, with flexible spending, 401K, disability and supplemental life, gym membership, generous paid holidays and vacation, flex time and Friday afternoons off.

=====  
Position(s): Mechanical Engineer P.E. & Electrical Engineer P.E.  
Company: Shaffer Baucom Engineering & Consulting  
Web Site: [sbengr.com](http://sbengr.com)  
Main Phone: 303.986.8200  
Fax: 303.986.8222  
Address: 7333 W. Jefferson Ave., Suite 230 Lakewood, CO 80235  
  
Contact: Ellie Dugle  
Contact Phone: 303.986.8200  
Contact Email: [edugle@sbengr.com](mailto:edugle@sbengr.com)





# EMPLOYMENT LISTINGS



## More Info:

Shaffer Baucom Engineering & Consulting is a mechanical & electrical consulting firm in Lakewood, CO. Principals of the firm have served owners/clients in the Denver area for over 25 years. The ideal candidate would have a minimum of 7 years experience as a consulting engineer. PE license is required. We have an excellent benefit package. We offer a very competitive salary and bonus program. Please send your resume and references to Ellie Dugle at the above mailing or email address.

=====  
Position(s): Mechanical Engineer, Electrical Engineer  
Company: Summit MEP Consultants, Inc.  
Web site: www.summitmep.com  
Phone: 303-904-9585  
Fax: 303-948-2269  
Address: 2750 S. Wadsworth Blvd., Suite D-202, Denver, CO 80227  
Contact: Michael McGraw, Vice President  
Email resume in strictest confidence to mem@summitmep.com

## Mechanical Engineer

Position requires motivated, degreed engineer with multiple talents including: client development, project management and design of HVAC, plumbing and fire protection. LEED AP certification is a plus. Hiring bonus offered for successful candidate or successful referral.

## Electrical Engineer

Position requires motivated, degreed engineer with multiple talents including: client development, project management and design of power, lighting and fire alarms. Hiring bonus offered for successful candidate or successful referral. PE certification is a plus.





# RESEARCH



*Don't wait, please donate for the 2006-2007 calendar year*

Mail Check To:

**ASHRAE RESEARCH**

c/o Big Ass Fans  
10699 Riverbrook Circle  
Littleton, CO 80126

**Your contribution puts us closer to achieving**

our goal. Please send what you can today!

\*Individual contributions of \$100 or more and  
Corporate contributions of \$150 or more  
receive this year's Commemorative Coin  
and Honor Roll Contribution status.

Name: \_\_\_\_\_

Company: \_\_\_\_\_

Address: \_\_\_\_\_

TEL: \_\_\_\_\_

|            |         |          |          |          |
|------------|---------|----------|----------|----------|
| INDIVIDUAL | \$25.00 | \$50.00  | \$75.00  | \$100.00 |
| CORPORATE  | \$75.00 | \$100.00 | \$175.00 | \$250.00 |

Other: \_\_\_\_\_

Other: \_\_\_\_\_

Or call Brian Lynch at 303.346.8955



## ROCKY MOUNTAIN CHAPTER



## FIRST CLASS

Chapter may not act for Society. Expressions, opinions, and comments within this newsletter should not be taken as those of the Chapter or Society.

Rocky Mountain Chapter of ASHRAE  
c/o Ken Urbanek, E.I.T.  
MKK Consulting Engineers, Inc.  
7600 East Orchard Road  
Greenwood Village, CO 80111-2518



## ACTIVITIES CALENDAR



For membership info or change of address contact: Michelle Swanson • [michelle.swanson@me-engineers.com](mailto:michelle.swanson@me-engineers.com)

### ASHRAE Events

May 2, 2007 Rocky Mountain ASHRAE Chapter Meeting “Seismic Design Criteria” Larry Gelin  
Wynkoop

May 18, 2007 Rocky Mountain ASHRAE Technical Conference Engineering for Sustainability Keynote  
Speaker Terry Townsend (Society President) Sheraton West Hotel in Lakewood

June 25, 2007 Rocky Mountain ASHRAE Golf Tournament Hiwan Golf Course

August 24, 2007 Rocky Mountain ASHRAE North Golf Tournament Mariana Butte Golf Course

Visit the new Rocky Mountain ASHRAE  
Website: [www.rockymtnashrae.com](http://www.rockymtnashrae.com)

Visit the new Rocky Mountain ASHRAE website:

[www.rockymtnashrae.com](http://www.rockymtnashrae.com)



NEWSLETTER OF THE ROCKY MOUNTAIN CHAPTER  
AMERICAN SOCIETY OF HEATING, REFRIGERATING, AND AIR-CONDITIONING ENGINEERS, INC.

Volume 40, Number 1

SEPTEMBER 2007

Editor: Adam Bishop



## SEPTEMBER MEETING



Visit the new Rocky Mountain ASHRAE website: [www.rockymtnashrae.com](http://www.rockymtnashrae.com)

**Date:** September 5, 2007

**Cost:** Rocky Mtn Chapter Members-\$25\*  
\*With Reservations Made Before Monday Noon

**Dinner Location:** Wynkoop Brewing Company  
1634 18th St.  
Denver, CO 80202  
(Downtown, Corner of 18<sup>th</sup> & Wynkoop)

Guests, Non-members or Without Reservation - \$30  
Students - \$20

**RSVP: Justin Dunkin**  
E-mail: [justind@cfmcompany.com](mailto:justind@cfmcompany.com)

**Time:** 5:30 Social Hour (Wynkoop)  
6:30 Dinner (Wynkoop)  
7:00 Program Begins (Wynkoop)



## SEPTEMBER PROGRAM



### Building Information Models

BIMS, Building information models. In our fast changing design environment there is a big demand for engineers to model buildings in 3D and provide intelligent models. What is currently available for our profession, what can we expect in the future. Computer modeling has become a necessity in the design market and this program will provide an overview from the software providers themselves.







# ROCKY MOUNTAIN ROSTER



President .....Brian Lynch.....blynch@bigassfans.com

President Elect .....Scott Martin .....smartin@rmhgroup.com

Vice President .....Jeremy Hollands .....jhollands@catorruma.com

Secretary .....Justin Dunkin .....justind@cfmcompany.com

Treasurer .....Ken Urbanek.....kurbanek@mkkeng.com

Newsletter Editor .....Adam Bishop.....adamb@cfmcompany.com

Membership .....Michelle Swanson .....michelle.swanson@me-engineers.com

Refrigeration .....Dave Rodenberg.....drodenberg@long.com

Historian .....John Rundquist .....Jonathan.E.Rundquist@jci.com

Technology Transfer .....Ken Urbanek.....kurbanek@mkkeng.com

Resource Promotions .....Scott Martin .....smartin@rmhgroup.com

Web Master .....Kyle Manske.....kmanske@comfortsystemsusa.com

Education Chairman .....Ronnie Zimmerman .....rzimmerman@mkkeng.com

Director .....Mike Fulton.....

Director .....Kevin Ainsworth .....kainsworth@mcgrath-inc.com

Past President .....Kevin Parrot .....KevinP@trinity-mechanical.com





# PRESIDENT'S MESSAGE



## President's Message

Welcome Back! We are coming off of a very successful year under the leadership of our past president **Kevin Parrot**. I would like to thank Kevin for all the time and energy he dedicated to our chapter last year. Our chapter was recognized last month at our annual Chapters Regional Conference (CRC) by receiving a Presidential Award of Excellence, **Scott Martin** was named Best Chapter Programs Chairperson, and we got the region "Top Dog" award for our efforts in raising money for ASHRAE Research. We topped our goal from ASHRAE Society by raising **\$38,661.00!**

The Region IX CRC will be held in Denver next summer. This event takes a great deal of coordination. Please contact **John Stumpf**, **Michelle Swanson**, or **Bill Mele** if you are interested in helping out.

We have a great list of programs scheduled this year under the direction of **Jeremy Hollands**. All of our meetings will be at the Wynkoop, except in April when we hope to do a tour along with our monthly program. All meetings will be on the first Wednesday of the month, except in January when we hope to give everyone a little extra time to recover from the holidays. Topics will be announced as they are confirmed.

We have a great team of volunteers who will be working very hard this year for our chapter. If you have a moment at our meeting, please take a moment to visit with them. Your Rocky Mountain ASHRAE Board of Governors for 2007-2008 are:

|                  |                                      |                                        |              |
|------------------|--------------------------------------|----------------------------------------|--------------|
| Brian Lynch      | President                            | blynch@bigassfans.com                  | 303.346.8955 |
| Scott Martin     | President Elect / Resource Promotion | smartin@rmhgroup.com                   | 303.239.0909 |
| Jeremy Hollands  | Vice President of CTTC               | jhollands@catorruma.com                | 303.462.8408 |
| Justin Dunkin    | Secretary                            | justind@cfmcompany.com                 | 303.761.2291 |
| Ken Urbanek      | Treasurer                            | kurbanek@mkkeng.com                    | 303.796.6000 |
| Adam Bishop      | Newsletter                           | adamb@cfmcompany.com                   | 303.607.4438 |
| Kevin Parrot     | Past President                       | KevinP@trinity-mechanical.com          | 303.442.3175 |
| Mike Fulton      | Director                             | mfulton@westernmechanicalsolutions.com | 720.934.8273 |
| Kevin Ainsworth  | Director                             | kainsworth@mcgrath-inc.com             | 303.969.0220 |
| Michelle Swanson | Membership                           | michelle.swanson@me-engineers.com      | 303.421.6655 |
| Jon Rundquist    | Historian                            | Jonathan.E.Rundquist@jci.com           | 303.904.7923 |
| Kyle Manske      | Website                              | kyle.manske@csusa.us                   | 303.449.2092 |
| Ronnie Zimmerman | Student Activities                   | rzimmerman@mkkeng.com                  | 303.796.6000 |

Finally, if there are any topics you want me to cover in the President's Message, send me an email or give me a call.

Thanks!

Brian Lynch  
President





# Annual Dinner Announcement



As a convenience to our members the Rocky Mountain Chapter of ASHRAE is now selling Annual Dinner Passes for the monthly chapter meetings!

## What does it cost?

- An Annual Dinner Pass costs \$200.

## What do you get?

- With the purchase of the Annual Dinner pass, you get 1 free dinner. That's right buy 8 dinners at normal price and the **last one is on us**.
- Smoother check-in and recognition at September and October's meeting.

## How do you get one?

- Fill out the form below and bring it with your check or credit card information to the September meeting.

## Corporate Passes?

- Annual passes also work great as Corporate Passes. Buy one or more and make them available to whoever is available to attend the monthly meeting.

Late registration, received after September 5<sup>th</sup>, will be allowed up to the October 3<sup>rd</sup> meeting but it will not include the free dinner.

If you have any questions regarding the Annual Dinner Pass please contact the Rocky Mountain Chapter Treasurer Ken Urbanek via e-mail at [kurbanek@mkkeng.com](mailto:kurbanek@mkkeng.com).





# GREEN OUR MEETINGS



In an effort to **Green** our meetings as ASHRAE Society has requested, we are encouraging our members to take public transportation to our meetings. Since our meetings are right next to Union Station, transportation via RTD should be easier.

At our summer meeting, the BOG agreed we would offer up **free raffle tickets to any member who presents a ticket from using public transportation**. Just show us your ticket from the light rail or bus when you check in and we will give you one free raffle ticket per meeting.

Visit [www.rtd-denver.com](http://www.rtd-denver.com) for system maps and times.





## The Latest in Technical, Energy, and Government Activities

### Updated Design Manual Published by ASHRAE

ATLANTA An updated Air-Conditioning Systems Design Manual, which bridges the gap between engineering theory and practical application, is available from ASHRAE.

The manual was first published in 1993 to assist entry-level engineers in the design of air-conditioning systems. The update includes new materials dealing with design process, indoor air quality and green design.



Changes to the guide include addition of information regarding:

- The various stages of the design process (conceptual design, schematic design and design development) and the role of HVAC&R systems design in each stage;
- The commissioning process;
- Indoor air quality, now noted as a major design intent for HVAC systems design;
- Green design for HVAC systems in high-performance buildings.

It also contains International System of Units (SI) throughout.

The book is the second in the ASHRAE Professional Series, published jointly by ASHRAE and Butterworth-Heinemann/Elsevier.

For more information please refer to the ASHRAE website at [www.ashrae.org](http://www.ashrae.org).

### ASHRAE Strives to Provide Advanced Energy Savings by 2010

ATLANTA Declaring that the building industry must improve building energy efficiency, ASHRAE is striving to increase building energy efficiency in Standard 90.1.

ASHRAE is looking to achieve 30 percent energy savings in the 2010 standard compared to ANSI/ASHRAE/IESNA Standard 90.1-2004, Energy Standard for Buildings Except Low-Rise Residential Buildings.

ASHRAE is committed to continually improving building energy performance. The savings are part of ASHRAE's goal to achieve market-viable net-zero energy buildings by 2030.

The plan to achieve 30 percent savings in 2010 is based on an average for all building types and climate weighted energy cost savings and may not be achieved for every building in every climate. Other elements of the plan are:

- Estimates of energy savings improvement be based on the total annual energy cost of the facility
- Energy savings estimated on ongoing basis
- Improvement calculations made in conjunction with technical resources made available by the Department of Energy.

If you have any questions regarding Technical, Energy, and Government Activities with respect to ASHRAE please contact local Chapter Technology Transfer Committee Chair Ken Urbanek via e-mail at [kurbanek@mkkeng.com](mailto:kurbanek@mkkeng.com).





# NATIONAL ASHRAE SCHOLARSHIP PROGRAM



## NATIONAL ASHRAE SCHOLARSHIP PROGRAM

The ASHRAE Scholarship Program is designed to encourage and assist in the education of men and women pursuing a career in the field of heating, ventilating, air conditioning and refrigeration (HVAC&R) through its granting of scholarships and fellowships. The program also serves the public interest by aiding in the education of men and women to become qualified to practice as engineers in the HVAC&R field.

For more information and scholarship applications please visit the ASHRAE website at <http://www.ashrae.org>



## MEMBERSHIP PROMOTION



Welcome to September's edition of "The Membership Promotion Page." The chapter's roster has been updated please take a close look at the roster located at [www.rockymtnashrae.com](http://www.rockymtnashrae.com) for the following:

1. If you are a member of ASHRAE (student, associate, member, etc.) your name should be included within the roster.
2. If you have requested that your contact address be your residential address, I have only included your name and the city and state of your residence.
3. If you have requested that your contact address be your business address, I have included your name, the business name and mailing address, and your email address.
4. If a "0" appears where your email address should be, ASHRAE does not have an email address for you assuming your contact address is your business address.
5. Your name appears in the same format ASHRAE has it recorded. I have not attempted to add "Dr", "PE", "PhD" or other pertinent information that ASHRAE does not have.
6. If any of your information is incorrect, or if you want changes made to your information, please send an email to [michelle.swanson@me-engineers.com](mailto:michelle.swanson@me-engineers.com) and I will make the requested changes.
7. If you have been omitted from this list and want to know why, please send an email to [michelle.swanson@me-engineers.com](mailto:michelle.swanson@me-engineers.com) and I will research why ASHRAE is not including you. Common reasons for omission include human error and unpaid ASHRAE membership dues.

Also please look around your company and contacts and let people know about the benefits of joining AHSRAE





# CRC ANNOUNCEMENT



## CRC 2008 Denver Colorado August 13<sup>th</sup> 18<sup>th</sup>

Good afternoon ASHRAE Members,

I have been asked to Chair the Convention of Regional Chairs (CRC) here in Denver and for those that have been involved in that process or have attended one of these events know that it takes a lot of effort of the local chapter to make this an enjoyable and successful event.

I am soliciting the general membership to ensure that everyone has an opportunity to participate. The kick off meeting for this will be the second or third week in January. Once I get responses of those interested I will send out a time and place where we will meet to move forward.

This commitment would require monthly meetings for approx an hour over lunch and as the event gets closer we would meet more frequently to ensure that all the details are covered.

Here are a few of the committees that are available so if you are interested in one over the other please inform me of your interest.

Banquet / Hotel Curtis Hotel is the location Banquet details needed

Companions - Hospitality Room, Sightseeing events, transportation Ensuring that they have a place to meet and events to attend.

Decorations Gift Baskets, Banners, etc.

Entertainment Coordinate Events on and off site.

Finance Budget reconciliation of income and expenses

Publicity Mailers, Printing, Photography, Interviews, Special Invitations, and other publicity items

Reception and Registration Welcoming Guest, Registration, Name badges, Pre-Registration, Meeting Venue and Identification Signs.

Social- Presidents Luncheon, Banquets, Awards Functions, Employers Recognition breakfast  
Technical Programs-Technical Talks, Panel Forums, Technical Tours, - Coordinating these events and speakers.

Transportation - Coordinate arrival of delegates and ensure adequate transportation is provided for all events.

Please respond via email to [john.d.stumpf@jci.com](mailto:john.d.stumpf@jci.com) for further details or to volunteer to make this the best CRC in decades.







# DISTINGUISHED SERVICE AWARD



## News

**AMERICAN SOCIETY OF HEATING, REFRIGERATING AND AIR-CONDITIONING ENGINEERS**  
1791 Tullie Circle, NEAtlanta, GA 30329-2305404-636-8400 [www.ashrae.org](http://www.ashrae.org)

### **Boulder Engineer Receives ASHRAE Distinguished Service Award**

LONG BEACH - Michael J. Brandemuehl received a Distinguished Service Award from the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) at its 2007 Annual Meeting held here June 23-27.

The Distinguished Service Award salutes members of any grade for giving freely of their time and talent on behalf of the Society. The honor recognizes participation in chapter, regional and Society activities.

Michael J. Brandemuehl is an associate professor at the University of Colorado at Boulder. He has served on or chaired several technical committees, including energy calculations, building operations dynamics, and smart building systems.

Since 2003, Brandemuehl has served on ASHRAE's Research Administration Committee and will serve as its chair beginning in July. Through this committee, he has helped promote sustainable building research in support of ASHRAE's strategic plan.

Brandemuehl has furthered his Society activities with his work on the scoping committee for the *Advanced Energy Design Guide for Commercial Buildings*, and by serving as a faculty advisor for his university's student branch.

ASHRAE, founded in 1894, is an international organization of 50,000 persons. ASHRAE fulfills its mission of advancing heating, ventilation, air conditioning and refrigeration to serve humanity and promote a sustainable world through research, standards writing, publishing and continuing education. For more information, visit [www.ashrae.org](http://www.ashrae.org).





# SEPTEMBER EMPLOYMENT LISTINGS



Position: Mechanical Engineer, HVAC/Plumbing Designer, Electrical Engineer  
Company: Cator, Ruma & Associates  
Website: [www.catorruma.com](http://www.catorruma.com)  
Main Phone: 303-232-6200  
FAX: 303-233-3701  
Address: 1550 Dover St., Suite 2  
Lakewood, Co 80215  
Contact: send resumes to [cra-resumes@catorruma.com](mailto:cra-resumes@catorruma.com)

More Information:

## MECHANICAL ENGINEERS/DESIGNERS

Our office location is changing, but our commitment to quality engineering is not! Join our team as we move into our new building in Lakewood. Cator, Ruma & Associates has new/additional positions for Mechanical engineers/designers. Our MEP firm designs healthcare, educational and commercial facilities. We are also looking for AUTOCAD DESIGNERS AND ELECTRICAL ENGINEERS/DESIGNERS. We offer an excellent benefit package (salary, medical, 401K) and Friday afternoons off. Resumes to [cra-resumes@catorruma.com](mailto:cra-resumes@catorruma.com) or fax 303-233-3701. Visit [www.catorruma.com](http://www.catorruma.com).

=====  
Position(s): HVAC Project Engineer or Systems Designer  
Company: Innovative Mechanical Systems, Inc.  
Web Site: [www.innovativemechanicalsystems.com](http://www.innovativemechanicalsystems.com)  
Main Phone: 720-890-1080  
Fax: 720-890-1780  
Address: 1500 Cherry Street, Suite A, Louisville, CO 80027

Contact: Bonnie Baas  
Contact Phone: 720-890-1080  
Contact Email: [bonnie@innmechsys.com](mailto:bonnie@innmechsys.com)

More Info:

Innovative Mechanical Systems, Inc., a Mechanical Design/Build Contractor with in-house engineering department seeks HVAC Project Engineer or Systems Designer. Applicants must be proficient in HVAC systems design including load calculations, equipment selection, hydronic system sizing, mechanical systems layout and drawing coordination. Knowledge of AutoCAD, local codes and a minimum of 5 years experience required; knowledge of Autodesk Building Systems a plus. Excellent salary and benefit package including employer matching 401(k). Send resume to Attn: Engineering, Innovative Mechanical Systems, Inc., 1500 Cherry Street, Suite A, Louisville, CO 80027 or e-mail to [bonnie@innmechsys.com](mailto:bonnie@innmechsys.com)





# EMPLOYMENT LISTINGS



Position(s): Mechanical Engineer, Mechanical Designer, Electrical Engineer  
Company: JBA Consulting Engineers  
Web site: [www.jbace.com](http://www.jbace.com)  
Phone: 303-907-4285  
Address: 13952 Denver West Parkway, Suite 250, Lakewood, CO 80401  
Contact: Bryan Moen, P.E.  
Email resume in confidence to [bmoen@jbace.com](mailto:bmoen@jbace.com) for Denver area job openings or [jobs@jbace.com](mailto:jobs@jbace.com) for openings in Las Vegas and Costa Mesa, CA

JBA Consulting Engineers is a multi-discipline national engineering firm specializing in the design and implementation of HVAC, plumbing, electrical, telecommunications, acoustics, audio/visual, life safety, and energy conservation design. JBA Consulting Engineers was founded in 1966 and has provided professional consulting and engineering services for hotels, casinos, educational facilities, judicial facilities, hospitals, major airport expansions, office buildings, retail, and multi-use facilities. JBA Currently has positions available in Denver, Las Vegas, and Costa Mesa, CA and is seeking qualified employees to staff and share in an exciting opportunity to work with a progressive global-minded firm with tremendous growth potential. JBA offers excellent benefits with bonus opportunities available. Salary DOE.

## Mechanical Engineer

Provide design and supervision of design of others for plumbing and HVAC systems. Bachelors Degree in Architectural or Mechanical Engineering from an accredited university or equivalent experience. Proven ability to perform the duties specified with prior project experience at an equivalent level of responsibility. Minimum 3 years experience. PE in Colorado or EIT with ability to obtain PE preferred.

## Mechanical Designer

Provide design for plumbing and HVAC systems. Proven ability to perform the duties specified with prior project experience at an equivalent level of responsibility. Minimum 3 years experience.

## Electrical Engineer

Provide design and supervision of design by others for power and lighting systems. Bachelors Degree in Architectural or Electrical Engineering from an accredited university or equivalent experience. Proven ability to perform the duties specified with prior project experience at an equivalent level of responsibility. Minimum 5 years experience. PE in Colorado or ability to obtain is preferred.

## Electrical Designer

Provide design for power and lighting systems. Proven ability to perform the duties specified with prior project experience at an equivalent level of responsibility. Minimum 3 years experience.





# EMPLOYMENT LISTINGS



Position(s): Mechanical Engineer  
Company: M-E Engineers, Inc.  
Web Site: [www.me-engineers.com](http://www.me-engineers.com)  
Main Phone: 303-421-6655  
Fax: 303-421-0331  
Address: 10055 W. 43<sup>rd</sup> Ave., Wheat Ridge, CO 80033

Contact: Trish Lovato  
Contact Phone: 720-898-3111  
Contact Email: [tlovato@me-engineers.com](mailto:tlovato@me-engineers.com)

## More Info:

M-E Engineers, Inc. is an international engineering firm seeking Mechanical Engineers to work on sports facilities, laboratories, health care and commercial projects. Preferred candidates should have 3+ years experience in the design of HVAC and plumbing systems. These positions require strong technical abilities, organizational skills and attitude. PE preferred.

About M-E Engineers, Inc.: **M-E Engineers, Inc.**, founded in 1981, is a full-service mechanical and electrical consulting engineering firm with an outstanding record in the design of healthcare and laboratories, institutional, sports/entertainment facilities, educational, recreational, arts and culture, commercial, hospitality, and residential. Currently, our firm has a staff of over 240 people and has offices in Denver, CO; Colorado Springs, CO; Vail, CO; Los Angeles, CA; San Diego, CA; New York, NY; Kansas City, MO and London, England.

=====  
Position(s): Plans Review Engineer-Mechanical  
Company: City and County of Denver  
Web Site: <http://www.DenverGov.org/Jobs>  
Main Phone: 720-913-JOBS (5627)  
Address: 201 W Colfax Ave, Dept 412, Denver, CO 80202

Contact: Ted Pacheco  
Contact Phone: 720-913-5620

More Info: Visit <http://www.DenverGov.org/Jobs>

The City of Denver's Community Planning & Development Department is seeking a Mechanical Plans Review Engineer.

Responsibilities include the review of building mechanical and plumbing construction documents for compliance to the Denver Building Code for new and existing buildings.

Requires a BS in Mechanical Engineering; plus 3 years of professional mechanical construction engineering experience working as a lead project engineer. Driver's license and Professional Engineering License is required at time of application. International Code Conference Plans Examiner Certification is required by the end of the probationary period.

Applicants must apply at [www.DenverGov.org/Jobs](http://www.DenverGov.org/Jobs) by 6/22/07. EOE





# EMPLOYMENT LISTINGS



Position: Freelance HVAC designer  
Company: Chason Energy  
Web Site: [www.chasonenergy.com](http://www.chasonenergy.com)  
Main Phone: 303-670-4430  
Fax: 303-459-2004  
Address: 1153 Bergen Parkway  
Suite M301  
Evergreen, CO 80439

Contact: Russ Keeler  
Contact Email: [russ@chasonconsulting.com](mailto:russ@chasonconsulting.com)

## More Info:

Chason Energy provides energy consulting and MEP design services for commercial clients. We are looking for a part time HVAC designer with a minimum of 5 years experience. Plumbing design knowledge is a plus. Position requires understanding of Uniform Mechanical and Plumbing Codes and International Building Code. CAD capability required.

=====

Position: Mechanical Plans Review Engineer  
Company: City and County of Denver  
Web Site: [Denvergov.org](http://Denvergov.org)  
Address: 201 W. Colfax Ave Dept 205, Denver, CO 80202

Contact: Danny Boncich  
Contact Phone: (720) 865-2828  
Contact Email: [danny.boncich@ci.denver.co.us](mailto:danny.boncich@ci.denver.co.us)

## More Info:

The City of Denver's Community Planning & Development Department is seeking a Mechanical Plans Review Engineer. Responsibilities include the review of building mechanical and plumbing construction documents for compliance to the Denver Building Code for new and existing buildings. Requires a BS in Mechanical Engineering; plus 3 years of professional mechanical construction engineering experience working as a lead project engineer. Driver's license and Professional Engineering License is required at time of application. International Code Conference Plans Examiner Certification is required by the end of the probationary period.

Applicants must apply on-line at [www.denvergov.org](http://www.denvergov.org)





Name: \_\_\_\_\_  
(Last) (First) (MI)

Status: Renewal \_\_\_\_\_ New Member \_\_\_\_\_ Address Change \_\_\_\_\_

Please circle preferred mailing address:  
Home Address and Phone

Business Name, Address and Phone

\_\_\_\_\_  
\_\_\_\_\_  
p: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
p: \_\_\_\_\_

Preferred email address: \_\_\_\_\_

Society Membership Number / Grade: \_\_\_\_\_

Name Tag (\$10.00) Paid? Y N

Name to appear on name tag as: \_\_\_\_\_

I would like to be contacted about serving on one of the following committees or functions (Please circle):

- |                       |                                      |
|-----------------------|--------------------------------------|
| A. Newsletter         | H. Research Fund Promotions          |
| B. Membership         | I. Monthly Meeting Programs          |
| C. Meeting Attendance | J. Publicity                         |
| D. Education          | K. Spouse's Night / Social Committee |
| E. Golf               | L. Colorado Engineering Council      |
| F. Chapter Historian  | M. General (Committee Help)          |
| G. Technical Seminars | N. Energy Committee                  |

Please mail this invoice and your check for \$50.00 (2007 / 2008 year) + \$10.00 payable to **Rocky Mountain Chapter ASHRAE** to the address listed below. ASHRAE will invoice you for both society and local dues every year following the first year.

Ms. Michelle Swanson, PE  
Rocky Mountain Chapter ASHRAE Membership Promotion Chair  
10055 W 43<sup>rd</sup> Ave, Wheat Ridge, CO 80033  
[michelle.swanson@me-engineers.com](mailto:michelle.swanson@me-engineers.com)





# RESEARCH



*Don't wait, please donate for the 2006-2007 calendar year*

Mail Check To:

**ASHRAE RESEARCH**

c/o Big Ass Fans  
10699 Riverbrook Circle  
Littleton, CO 80126

**Your contribution puts us closer to achieving**

our goal. Please send what you can today!

\*Individual contributions of \$100 or more and  
Corporate contributions of \$150 or more  
receive this year's Commemorative Coin  
and Honor Roll Contribution status.

Name: \_\_\_\_\_

Company: \_\_\_\_\_

Address: \_\_\_\_\_

TEL: \_\_\_\_\_

|            |         |          |          |          |
|------------|---------|----------|----------|----------|
| INDIVIDUAL | \$25.00 | \$50.00  | \$75.00  | \$100.00 |
| CORPORATE  | \$75.00 | \$100.00 | \$175.00 | \$250.00 |

Other: \_\_\_\_\_

Other: \_\_\_\_\_

Or call Brian Lynch at 303.346.8955



## ROCKY MOUNTAIN CHAPTER







# NORTHERN ASHRAE GOLF TOURNAMENT SPONSOR



The Northern ASHRAE Golf Tournament provides financial funds to the ASHRAE Research program at the Society level. Each year the Rocky Mountain Chapter of ASHRAE has a goal to raise funds for the research program. This year the goal is to raise \$34,000. Annually the Rocky Mountain chapter receives back from Society research project dollars for the local universities which is ten times more than we generate. Your support this year will help continue our chapter's support of the research program. If your firm is a manufacturer's representative please ask your manufacturers to kick in some funds and support the tournament.

## FRIDAY SEPTEMBER 28, 2007

**Sign at Tee Box** (Includes one round of Golf) **\$ 300.00**

### SPONSORS DUE BY September 18, 2007

|                                 |                         |
|---------------------------------|-------------------------|
| Name                            | _____                   |
| Company                         | _____                   |
| Address                         | _____                   |
| City, State, Zip                | _____                   |
| Phone:                          | _____                   |
| Fax:                            | _____                   |
| Email                           | _____                   |
| Sign at Tee Box                 | ___ @ \$ 300.00 = _____ |
| Manufacturer's Signs            | ___ @ \$ 50.00 = _____  |
| Additional Donation to Research | = _____                 |
| <b>Total</b>                    | <b>= _____</b>          |

Make Check Payable to **Rocky Mountain ASHRAE**

Please return to:

Christopher Huff c/o Johnson Controls, Inc  
10289 W. Centennial Rd Littleton, CO 80127  
Phone: 303-904-7921 Fax: 303-979-6847

Email: [christopher.d.huff@jci.com](mailto:christopher.d.huff@jci.com)

### List of Manufacturer's Signs

|       |       |       |
|-------|-------|-------|
| _____ | _____ | _____ |
| _____ | _____ | _____ |



# NORTHERN ASHRAE GOLF TOURNAMENT

## To Benefit ASHRAE Research

### MARIANA BUTTE GOLF COURSE

701 Clubhouse Drive  
Loveland, CO 80537  
PHONE: (970) 667-8308

**FRIDAY September  
28, 2007**

7 AM CHECK-IN / RANGE BALLS  
8 AM SHOT-GUN START  
Following golf LUNCH/AWARDS

**FORMAT: GROUP SCRAMBLE  
PRIZES**



### ENTRY DEADLINE September 18, 2007

Name \_\_\_\_\_  
Company \_\_\_\_\_  
Address \_\_\_\_\_  
City, State, Zip \_\_\_\_\_  
Phone: \_\_\_\_\_  
Fax: \_\_\_\_\_  
Email \_\_\_\_\_

#### Players in Group

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_

\_\_\_\_\_ # of Players @ \$100 each (lunch included) = \$ \_\_\_\_\_

Additional Donation to ASHRAE Research = \$ \_\_\_\_\_

Total = \$ \_\_\_\_\_

Make Check Payable to **Rocky Mountain ASHRAE**

Please return to:

Christopher Huff c/o Johnson Controls, Inc  
10289 W. Centennial Rd Littleton, CO 80127  
Phone: 303-904-7921 Fax: 303-979-6847  
Email: [christopher.d.huff@jci.com](mailto:christopher.d.huff@jci.com)



HOLLAND & HART<sup>LLP</sup>  
THE LAW OUT WEST<sup>®</sup>



present

# Building GREEN CONFERENCE & EXPO

## COLORADO

## October 17, 2007

7:15 am – 12:00 noon • Denver Athletic Club, Grand Ballroom • 1325 Glenarm Place, Denver

IN ASSOCIATION WITH

D O M A N I  
BUILDING SUSTAINABILITY



M-E ENGINEERS, INC.



herman miller  
herman miller workplace resource  
workplace resource



TRADE  
ASSOCIATION  
SPONSOR





## WHO SHOULD ATTEND

Developers, investors, owners, brokers, tenants, property managers, contractors, architects, engineers, land planners, lenders.

### 7:15 – 7:45 a.m.

Registration, Continental Breakfast and Networking

### 7:45 – 8:00 a.m.

**Welcome and Opening Remarks**  
Marc Painter, Partner, Holland & Hart

### 8:00 a.m. – 12:00 p.m.

**Opening Keynote Address:**  
Mayor John Hickenlooper or  
Michele Weingarden, Director, Mayor's  
Greenprint Denver Office (unconfirmed)

**Why Build Green? Financial incentives, rebates, grants, operational savings...**  
Lyla Gambow, CPM, Senior Vice President, Property Management, Transwestern  
John Hereford, Principal, Hereford Capital Advisors  
Brian Levitt, President, Hampton Development Company

**The Latest in Design, Construction & Engineering Technology**  
Mark Kieffer, Principal, Norris Design  
Speaker TBD, JE Dunn Construction Company  
Michael Brendle, Principal, RNL  
Ted Prythero, Principal, M-E Engineers  
Moderator: William Sami, Chief Executive Officer, DOMANI

**Developer Panel – Challenges, investment strategy, user demand, short-term investment vs. long-term payoff, green construction costs...**

Dean Barber, Vice President, Commercial & Mixed-Use Development, McWhinney Enterprises  
Craig Carlson, Principal, Carlson Parkhill LLC  
Jay Despard, Project Manager, Hines Interests  
T. Amory Host, Chairman & President, Peak Properties & Development Corp.  
Rich McClintock, President, Westfield Development  
Susan McFaddin, LEED® AP, Ph.D., Co-Developer, Seven Generations, LLC  
Matthew Stokes, Development Director, Continuum Partners LLC  
George Swintz, Vice President of Asset Management/Leasing, Corporate Office Properties Trust  
Ben Weeks, Principal, Aardex LLC  
Moderator: Beat U. Steiner, Partner, Holland & Hart

**Closing Keynote Address**  
Chuck Sullivan, Managing Director of North American Capital Management, Prologis  
TOPIC: *Green Building in Industrial Real Estate*

**Closing Remarks**  
Marc Painter, Partner, Holland & Hart

### Space is limited to 500 • Register NOW

\$65 per person (includes continental breakfast & materials)  
Please log on to [www.crej.com](http://www.crej.com), scroll down to the bottom of the Home Page and click on the Building Green Colorado Conference and then click on Register for Event Online.  
Payment must accompany registration. Makes checks payable to:  
Colorado Real Estate Journal,  
1630 Welton Street, Suite 300, Denver, CO 80202  
Visa, MasterCard and American Express accepted  
A full credit will be made if you cancel more than five days prior to the conference.  
Earn four hours of continuing education credit.



# WHAT IS YOUR COMPANY'S "GREEN STRATEGY"?

## FIRST CLASS

Chapter may not act for Society. Expressions, opinions, and comments within this newsletter should not be taken as those of the Chapter or Society.

Rocky Mountain Chapter of ASHRAE  
CFM Company  
c/o Adam Bishop  
1440 South Lipan St.  
Denver, CO 80223-3411



## ACTIVITIES CALENDAR



For membership info or change of address contact: Michelle Swanson • [michelle.swanson@me-engineers.com](mailto:michelle.swanson@me-engineers.com)

### ASHRAE Events

- |                       |                                                                                    |
|-----------------------|------------------------------------------------------------------------------------|
| September 05, 2007    | Rocky Mountain ASHRAE Chapter Meeting “Building Information Models” - Wynkoop      |
| September 20-22, 2007 | Colorado's Premier Green Building Conference and Expo Marriott Hotel, Fort Collins |
| September 28, 2007    | Rocky Mountain ASHRAE North Golf Tournament Mariana Butte Golf Course              |
| October 07, 2007      | Building Green Conference & Expo - Denver                                          |
| August 13-18, 2008    | Convention of Regional Chairs - Denver                                             |

Visit the new Rocky Mountain ASHRAE website:

[www.rockymtnashrae.com](http://www.rockymtnashrae.com)



NEWSLETTER OF THE ROCKY MOUNTAIN CHAPTER  
AMERICAN SOCIETY OF HEATING, REFRIGERATING, AND AIR-CONDITIONING ENGINEERS, INC.

Volume 49, Number 2

OCTOBER 2007

Editor: Adam Bishop



## SEPTEMBER MEETING



Visit the new Rocky Mountain ASHRAE website: [www.rockymtnashrae.com](http://www.rockymtnashrae.com)

**Date:** October 3, 2007

**Cost:** Rocky Mtn Chapter Members-\$25\*  
\*With Reservations Made Before Monday Noon

**Dinner Location:** The Curtis  
1405 Curtis Street  
Denver, CO 80202  
(Downtown, Corner of 14<sup>th</sup> & Curtis)

Guests, Non-members or Without Reservation - \$30  
Students - \$20

**RSVP:** Justin Dunkin  
E-mail: [justind@cfmcompany.com](mailto:justind@cfmcompany.com)

**Time:** 5:30 Social Hour (Curtis)  
6:30 Dinner (Curtis)  
7:00 Program Begins (Curtis)

*The Curtis has on site parking for \$8.00. It is also just a couple of blocks away from the Convention Center stop of the Light Rail.*



## OCTOBER PROGRAM



### SPACE AIR DISTRIBUTION

Dan Int Hout, an ASHRAE distinguished lecturer will be presenting on space air distribution. Evaluating personal comfort, diffuser selection and room design. We will examine different diffuser types, throw patterns, sizing and effects on occupant comfort. How does air distribution relate to LEED points? How have ASHRAE standards such as 62 changed the way Engineers look at room design? How can engineers limit liability against poor diffuser selection?





# ROCKY MOUNTAIN ROSTER



President .....**Brian Lynch** .....blynch@bigassfans.com

President Elect .....**Scott Martin**.....smartin@rmhgroup.com

Vice President .....**Jeremy Hollands**.....jhollands@catorruma.com

Secretary .....**Justin Dunkin**.....justind@cfmcompany.com

Treasurer .....**Ken Urbanek** .....kurbanek@mkkeng.com

Newsletter Editor .....**Adam Bishop**.....adamb@cfmcompany.com

Membership .....**Michelle Swanson**.....michelle.swanson@me-engineers.com

Refrigeration .....**Dave Rodenberg**.....drodenberg@long.com

Historian .....**Jon Rundquist** .....Jonathan.E.Rundquist@jci.com

Technology Transfer .....**Ken Urbanek** .....kurbanek@mkkeng.com

Resource Promotions .....**Scott Martin**.....smartin@rmhgroup.com

Web Master .....**Kyle Manske** .....kmanske@comfortsystemsusa.com

Education Chairman .....**Kevin Ainsworth** .....kainsworth@mcgrath-inc.com

Director .....**Mike Fulton** .....mfulton@westernmechanicalsolutions.com

Director .....**Kevin Ainsworth** .....kainsworth@mcgrath-inc.com

Past President .....**Kevin Parrot**.....KevinP@trinity-mechanical.com







# PRESIDENT'S MESSAGE



Well, just when we I told everyone we would be meeting at the Wynkoop each month, we have to go and change things. Due to a scheduling glitch, we need to move our monthly meetings over to The Curtis Hotel. We are actually pretty excited to use the Curtis Hotel since we will be hosting our CRC there in August 2008. I know **John Stumpf**, **Michelle Swanson**, and **Bill Mele** wouldn't have chosen the location if it wasn't a great place for us to meet. The Curtis is only a couple of blocks from the Convention Center stop of the Light Rail, so you can still use that method to get to the meetings. Our apologies for the lay-out of the presentation room last month. It was the best we could do on the short notice we received once we realized the error.

Speaking of public transportation, we had 24 (out of 80) people take the bus or light rail to our meeting last month. 22 even took it home. Special thanks to **Mike Fulton** for giving rides to those that chose to stick around and “network” instead of catching their bus on time.

Our program this month will be presented by ASHRAE Distinguished Lecturer **Dan Int-Hout**. Mr. Int-Hout is a fabulous speaker and always has valuable information to share. I have heard him speak several times and serve on an ASHRAE committee with him. He gets my attention every time he speaks. I believe you will see why ASHRAE has awarded him the Distinguished Lecturer status.

As always, if there are any topics you want me to cover in the President's Message, send me an email or give me a call.

Thanks!

Brian Lynch  
President





# GREEN OUR MEETINGS



We had 30% of our meeting attendees use public transportation last month. Again we will offer free raffle tickets to any member who presents a ticket from using public transportation. Just show us your ticket from the light rail or bus when you check in and we will give you one free raffle ticket per meeting. This month the meeting is at The Curtis Hotel, just a couple of blocks from the Convention Center Light Rail stop. Visit [www.rtd-denver.com](http://www.rtd-denver.com) for system maps and times.

Lastly, ASHRAE President Kent Peterson has started a new blog which allows him to share what is happening in the ASHRAE community. It also provides you an opportunity to comment on HVACR industry global trends and possibilities as ASHRAE transitions toward a sustainable built environment. Go to <http://cms.ashrae.biz/blog/> to take a look.





## History in the HVAC Industry

With this months guest lecturer speaking on Air Distribution it seems fitting to look back at how this theory evolved many years ago. In the middle ages, the **Miasmatic Theory of Disease** took shape. This was based on the theory that diseases could be spread through “bad air”. In the mid 1800's, John Gorrie, considered the father of refrigeration and air conditioning, took this theory a step further. He theorized that sickrooms should be cooled to prevent the spread of disease. He cooled rooms with ice in a basin suspended from the ceiling. Cool air being heavier, flowed over the patient and exited through an opening near the floor. Things sure have advanced since then!





## The Latest in Technical, Energy, and Government Activities

### Updated Design Manual Published by ASHRAE

ATLANTA An updated Air-Conditioning Systems Design Manual, which bridges the gap between engineering theory and practical application, is available from ASHRAE.

The manual was first published in 1993 to assist entry-level engineers in the design of air-conditioning systems. The update includes new materials dealing with design process, indoor air quality and green design.



Changes to the guide include addition of information regarding:

- The various stages of the design process (conceptual design, schematic design and design development) and the role of HVAC&R systems design in each stage;
- The commissioning process;
- Indoor air quality, now noted as a major design intent for HVAC systems design;
- Green design for HVAC systems in high-performance buildings.

It also contains International System of Units (SI) throughout.

The book is the second in the ASHRAE Professional Series, published jointly by ASHRAE and Butterworth-Heinemann/Elsevier.

For more information please refer to the ASHRAE website at [www.ashrae.org](http://www.ashrae.org).

### ASHRAE Strives to Provide Advanced Energy Savings by 2010

ATLANTA Declaring that the building industry must improve building energy efficiency, ASHRAE is striving to increase building energy efficiency in Standard 90.1.

ASHRAE is looking to achieve 30 percent energy savings in the 2010 standard compared to ANSI/ASHRAE/IESNA Standard 90.1-2004, Energy Standard for Buildings Except Low-Rise Residential Buildings.

ASHRAE is committed to continually improving building energy performance. The savings are part of ASHRAE's goal to achieve market-viable net-zero energy buildings by 2030.

The plan to achieve 30 percent savings in 2010 is based on an average for all building types and climate weighted energy cost savings and may not be achieved for every building in every climate. Other elements of the plan are:

- Estimates of energy savings improvement be based on the total annual energy cost of the facility
- Energy savings estimated on ongoing basis
- Improvement calculations made in conjunction with technical resources made available by the Department of Energy.

If you have any questions regarding Technical, Energy, and Government Activities with respect to ASHRAE please contact local Chapter Technology Transfer Committee Chair Ken Urbanek via e-mail at [kurbanek@mkkeng.com](mailto:kurbanek@mkkeng.com).





# NATIONAL ASHRAE SCHOLARSHIP PROGRAM



The ASHRAE Scholarship Program is designed to encourage and assist in the education of men and women pursuing a career in the field of heating, ventilating, air conditioning and refrigeration (HVAC&R) through its granting of scholarships and fellowships.

The program also serves the public interest by aiding in the education of men and women to become qualified to practice as engineers in the HVAC&R field.

For more information and scholarship applications please visit the ASHRAE website at <http://www.ashrae.org>



## MEMBERSHIP PROMOTION



Welcome to October's edition of "The Membership Promotion Page." The chapter's roster has been updated please take a close look at the roster located at [www.rockymtnashrae.com](http://www.rockymtnashrae.com) for the following:

1. If you are a member of ASHRAE (student, associate, member, etc.) your name should be included within the roster.
2. If you have requested that your contact address be your residential address, I have only included your name and the city and state of your residence.
3. If you have requested that your contact address be your business address, I have included your name, the business name and mailing address, and your email address.
4. If a "0" appears where your email address should be, ASHRAE does not have an email address for you assuming your contact address is your business address.
5. Your name appears in the same format ASHRAE has it recorded. I have not attempted to add "Dr", "PE", "PhD" or other pertinent information that ASHRAE does not have.
6. If any of your information is incorrect, or if you want changes made to your information, please send an email to [michelle.swanson@me-engineers.com](mailto:michelle.swanson@me-engineers.com) and I will make the requested changes.
7. If you have been omitted from this list and want to know why, please send an email to [michelle.swanson@me-engineers.com](mailto:michelle.swanson@me-engineers.com) and I will research why ASHRAE is not including you. Common reasons for omission include human error and unpaid ASHRAE membership dues.

Also please look around your company and contacts and let people know about the benefits of joining AHSRAE





# CRC ANNOUNCEMENT



## CRC 2008 Denver Colorado August 13<sup>th</sup> 18<sup>th</sup>

Good afternoon ASHRAE Members,

I have been asked to Chair the Convention of Regional Chairs (CRC) here in Denver and for those that have been involved in that process or have attended one of these events know that it takes a lot of effort of the local chapter to make this an enjoyable and successful event.

I am soliciting the general membership to ensure that everyone has an opportunity to participate. The kick off meeting for this will be the second or third week in January. Once I get responses of those interested I will send out a time and place where we will meet to move forward.

This commitment would require monthly meetings for approx an hour over lunch and as the event gets closer we would meet more frequently to ensure that all the details are covered.

Here are a few of the committees that are available so if you are interested in one over the other please inform me of your interest.

Banquet / Hotel Curtis Hotel is the location Banquet details needed

Companions - Hospitality Room, Sightseeing events, transportation Ensuring that they have a place to meet and events to attend.

Decorations Gift Baskets, Banners, etc.

Entertainment Coordinate Events on and off site.

Finance Budget reconciliation of income and expenses

Publicity Mailers, Printing, Photography, Interviews, Special Invitations, and other publicity items

Reception and Registration Welcoming Guest, Registration, Name badges, Pre-Registration, Meeting Venue and Identification Signs.

Social- Presidents Luncheon, Banquets, Awards Functions, Employers Recognition breakfast

Technical Programs-Technical Talks, Panel Forums, Technical Tours, - Coordinating these events and speakers.

Transportation - Coordinate arrival of delegates and ensure adequate transportation is provided for all events.

Please respond via email to [john.d.stumpf@jci.com](mailto:john.d.stumpf@jci.com) for further details or to volunteer to make this the best CRC in decades.







# OCTOBER EMPLOYMENT LISTINGS



Position(s): Mechanical Engineers  
Company: E M C Engineers, Inc.  
Web Site: [www.emcengineers.com](http://www.emcengineers.com)  
Main Phone: 303-974-1200  
Fax: 303-974-1239  
Address: 143 Union Blvd., Suite 350, Lakewood, CO 80228  
Contact: Tom Poeling  
Contact Phone: 303-974-1200  
Contact Email: [tpoeling@emcengineers.com](mailto:tpoeling@emcengineers.com)

Background: EMC Engineers has 31 years experience in making buildings work better. Substantial and sustained growth in all of our core technical service areas has resulted in multiple opportunities for professional positions in energy engineering, high performance MEP design, commissioning new construction and retro-commissioning existing buildings. Our clients achieve significant reductions in operating costs and carbon footprint while increasing their productivity and performance.

EMC is a leader in delivering high performance building solutions. We have strong credentials in mechanical, electrical, and control systems for new construction and retrofit/modernization, energy engineering and commissioning. We are a national firm with 6 offices, appropriately diversified, and provide outstanding professional opportunities, un-matched benefits, and an opportunity to apply your engineering talent to really "make a difference." Positions are open in Denver, Salt Lake City and Irvine for:

**Junior Mechanical Engineers:** B.S. in Mechanical or Architectural Engineering plus 0 to 3 years of work experience. Successful candidates require background design (or analysis) of mechanical building systems (HVAC, plumbing, temperature controls). Candidate must be willing to accept a wide variety of engineering tasks, including site investigations, design, energy modeling, and system testing.

**Staff Mechanical Engineers:** B.S. in Mechanical or Architectural Engineering or comparable management or technical experience for non-degreed applicants. Successful candidates for Cx and Retro-Cx positions require background in commissioning and/or equipment testing and troubleshooting, including energy engineering and energy conservation for mechanical building systems (HVAC, plumbing, temperature controls). Successful candidates for design positions require demonstrated capability in design of HVAC, plumbing and controls systems. Design positions include energy efficiency analysis. Familiarity with USBGC LEED program and experience for high performance building projects is a plus.

=====  
Position: Mechanical Engineer, HVAC/Plumbing Designer, Electrical Engineer  
Company: Cator, Ruma & Associates  
Website: [www.catorruma.com](http://www.catorruma.com)  
Main Phone: 303-232-6200  
FAX: 303-233-3701  
Address: 1550 Dover St., Suite 2, Lakewood, Co 80215  
Contact: send resumes to [cra-resumes@catorruma.com](mailto:cra-resumes@catorruma.com)

**MECHANICAL ENGINEERS/DESIGNERS** Our office location is changing, but our commitment to quality engineering is not! Join our team as we move into our new building in Lakewood. Cator, Ruma & Associates has new/additional positions for MECHANICAL ENGINEERS AND DESIGNERS. Our MEP firm designs healthcare, educational and commercial facilities. We are also looking for AUTOCAD DESIGNERS AND ELECTRICAL ENGINEERS/DESIGNERS. We offer an excellent benefit package (salary, medical, 401K) and Friday afternoons off. Resumes to [cra-resumes@catorruma.com](mailto:cra-resumes@catorruma.com) or fax 303-233-3701. Visit [www.catorruma.com](http://www.catorruma.com).







# OCTOBER EMPLOYMENT LISTINGS



Positions: Mechanical & Electrical Engineers  
Company: Caveo, Inc. dba Caveo Consulting Engineers  
Website: [www.caveoeng.com](http://www.caveoeng.com)  
Main Phone: (720) 200-5955  
Fax: (720) 200-5530  
Address: 6143 S. Willow Drive, Suite 405  
Englewood, CO 80215

Contact: Susan Rookstool  
Contact Phone: (720) 200-5955  
Contact Email: [srookstool@caveoeng.com](mailto:srookstool@caveoeng.com)

## More Information:

Caveo Consulting Engineers, a growing MEP firm providing consulting engineering services exclusively for healthcare, has immediate openings for mid and upper level mechanical and electrical engineers who desire to make a living while making a contribution to the growing healthcare community. Caveo offers an excellent benefit package that includes medical and 401(k) plan as well as Friday afternoons off, a flexible and friendly work environment, and the opportunity to make a difference in a growing company. Please send resumes and requests for additional information to [srookstool@caveoeng.com](mailto:srookstool@caveoeng.com) and visit [www.caveoeng.com](http://www.caveoeng.com).

=====  
Position(s): HVAC Project Engineer or Systems Designer  
Company: Innovative Mechanical Systems, Inc.  
Web Site: [www.innovativemechanicalsystems.com](http://www.innovativemechanicalsystems.com)  
Main Phone: 720-890-1080  
Fax: 720-890-1780  
Address: 1500 Cherry Street, Suite A, Louisville, CO 80027

Contact: Bonnie Baas  
Contact Phone: 720-890-1080  
Contact Email: [bonnie@innmechsys.com](mailto:bonnie@innmechsys.com)

## More Info:

Innovative Mechanical Systems, Inc., a Mechanical Design/Build Contractor with in-house engineering department seeks HVAC Project Engineer or Systems Designer. Applicants must be proficient in HVAC systems design including load calculations, equipment selection, hydronic system sizing, mechanical systems layout and drawing coordination. Knowledge of AutoCAD, local codes and a minimum of 5 years experience required; knowledge of Autodesk Building Systems a plus. Excellent salary and benefit package including employer matching 401(k). Send resume to Attn: Engineering, Innovative Mechanical Systems, Inc., 1500 Cherry Street, Suite A, Louisville, CO 80027 or e-mail to [bonnie@innmechsys.com](mailto:bonnie@innmechsys.com)





# OCTOBER EMPLOYMENT LISTINGS



Position(s): Mechanical Engineer, Mechanical Designer, Electrical Engineer  
Company: JBA Consulting Engineers  
Web site: [www.jbace.com](http://www.jbace.com)  
Phone: 303-907-4285  
Address: 13952 Denver West Parkway, Suite 250, Lakewood, CO 80401  
Contact: Bryan Moen, P.E.  
Email resume in confidence to [bmoen@jbace.com](mailto:bmoen@jbace.com) for Denver area job openings or [jobs@jbace.com](mailto:jobs@jbace.com) for openings in Las Vegas and Costa Mesa, CA

JBA Consulting Engineers is a multi-discipline national engineering firm specializing in the design and implementation of HVAC, plumbing, electrical, telecommunications, acoustics, audio/visual, life safety, and energy conservation design. JBA Consulting Engineers was founded in 1966 and has provided professional consulting and engineering services for hotels, casinos, educational facilities, judicial facilities, hospitals, major airport expansions, office buildings, retail, and multi-use facilities. JBA Currently has positions available in Denver, Las Vegas, and Costa Mesa, CA and is seeking qualified employees to staff and share in an exciting opportunity to work with a progressive global-minded firm with tremendous growth potential. JBA offers excellent benefits with bonus opportunities available. Salary DOE.

## Mechanical Engineer

Provide design and supervision of design of others for plumbing and HVAC systems. Bachelors Degree in Architectural or Mechanical Engineering from an accredited university or equivalent experience. Proven ability to perform the duties specified with prior project experience at an equivalent level of responsibility. Minimum 3 years experience. PE in Colorado or EIT with ability to obtain PE preferred.

## Mechanical Designer

Provide design for plumbing and HVAC systems. Proven ability to perform the duties specified with prior project experience at an equivalent level of responsibility. Minimum 3 years experience.

## Electrical Engineer

Provide design and supervision of design by others for power and lighting systems. Bachelors Degree in Architectural or Electrical Engineering from an accredited university or equivalent experience. Proven ability to perform the duties specified with prior project experience at an equivalent level of responsibility. Minimum 5 years experience. PE in Colorado or ability to obtain is preferred.

## Electrical Designer

Provide design for power and lighting systems. Proven ability to perform the duties specified with prior project experience at an equivalent level of responsibility. Minimum 3 years experience.





# OCTOBER EMPLOYMENT LISTINGS



Position(s): Facilities Energy Management Engineer  
Company: City of Aurora  
Web Site: [www.auroragov.org](http://www.auroragov.org)  
Phone: 303-326-8163 or 303-326-8150  
Address: 13636 E. Ellsworth Avenue, Aurora, CO 80012  
Contact: Howard Kaplan, P.E.

## **Facilities Energy Management Engineer**

The City of Aurora is recruiting for an exciting newly established position. This individual will perform energy management and facilities repair/ construction program development for projects for over 120 City buildings. Conducts building energy audits. Helps develop electric and natural gas budgets for the City. Assignments provide for the application of independent judgment and initiative in the design and construction of projects to improve energy efficiency and environmental comfort in a full range of disciplines, including mechanical, electrical and structural improvements/ renovations. Oversees the application of LEED standards for new construction and renovation of existing buildings. Oversees the City's Energy Awareness Program. Qualifications: Bachelor's Degree in engineering or related field. EIT with 5 years of experience. LEED Accredited Professional Certification or ability to obtain certification within 6 months of employment. AutoCad a plus.

=====  
Position(s): Mechanical Engineer, P.E. / Electrical Engineer, P.E.  
Company: ShafferBaucom Engineering & Consulting  
Web Site: [sbengr.com](http://sbengr.com)  
Main Phone: 303.986.8200  
Fax: 303.986.8222  
Address: 7333 W. Jefferson Ave., Suite 230 Lakewood, CO 80235

Contact: Ellie Dugle  
Contact Phone: 303.986.8200

## More Info:

ShafferBaucom Engineering & Consulting is looking for a 5-8 year Mechanical Engineer, P.E. and a 5-8 year Electrical Engineer, P.E. to join our team. We provide an excellent and competitive benefit package including bonuses. Our firm works a 4.5 day work week with Friday afternoons off. We encourage you to visit our website [www.sbengr.com](http://www.sbengr.com). We provide both mechanical and electrical engineering services all over the Front Range area and the western slope. We take great pride in our team. We have great clients and interesting projects. Our firm promotes career growth and values everyone's contributions. Email your resume to [edugle@sbengr.com](mailto:edugle@sbengr.com).





# OCTOBER EMPLOYMENT LISTINGS



Company: Murphy Company  
Web Site: [www.murphynet.com](http://www.murphynet.com)  
Main Phone: 303-371-6600  
Fax: 303-371-6616  
Address: 3790 Wheeling Street, Denver CO 80239  
Contact: Human Resources  
Contact Email: [denverjobs@murphy-den.com](mailto:denverjobs@murphy-den.com)

**Company Info:** Founded in 1907, Murphy Company performs construction and engineering work in the industrial, commercial, municipal and institutional construction and service markets. Murphy Company is licensed in 32 states and has performed work in 25 states. Murphy has set the standard for mechanical and industrial construction and engineering earning the distinction of being ranked 10th largest mechanical specialty contracting firm in the 2006 ENR/Engineering News-Record. This is an opportunity to join a dynamic, growth-oriented company that offers a highly competitive compensation and excellent benefits package, along with opportunities for personal and professional development. For immediate consideration, please forward your resume and salary expectations via fax 303-371-6616 or email to [denverjobs@murphy-den.com](mailto:denverjobs@murphy-den.com). EOE

**Energy Engineer** Perform detailed building audits of MEP systems. Technical expert at identifying and quantifying energy and water conservation measures. Develop costs to implement measures, calculate energy baselines, estimate utility and maintenance savings. Will complete life cycle cost analysis, prepare and present proposals, assist project managers in implementation of recommendations. Engineering degree with 5-7 years experience in the energy management field related to electrical or HVAC systems, CEM certificate required. Controls system and lighting retrofit experience preferred.

**Design Build Engineer** Design-Build Engineer with experience at HVAC & Plumbing construction document production including calculations, layout, coordinate with other disciplines to include CAD drafting, survey of existing conditions and completion of construction drawings. The candidate should be interested in improving their understanding of the construction cost, constructability, and schedule implications of different design choices. Bachelors of Science Engineering Degree and Colorado PE License required. Minimum of 10 years design experience and prior construction experience a plus.

**Service Dispatcher** Individual takes, dispatches and follows-up on service calls; provide purchase orders and job numbers for techs; assemble job costs for billing to include payroll, accounts payable, purchase orders, warehouse charges etc. for billing; set-up jobs in Accounting system; order uniforms and maintain effective professional communication with clients. Must be flexible, detail-oriented, able to multi-task and maintain confidentiality; demonstrate a working knowledge of Microsoft office software; previous dispatch experience is a must; previous construction experience preferred.

**Quick Response Project Manager** Candidate sought to manage overall job progress; conduct safety audits, evaluate hazard potentials on project, organize safety orientations, and distribute safety information; plus develop and maintain client relationships. College degree preferred, along with ability to use MS Office and QuickPen Estimating System. Understanding of sheet metal, HVAC, piping, plumbing and refrigeration systems required. Understanding and ability to perform conceptual design and layout of HVAC and plumbing systems also required

**Senior Project Manager** Candidate must demonstrate leadership in the area of safety performance, have achieved a level of experience above and beyond that of a typical Project Manager, must be proficient in the understanding, accuracy, and timely completion of job cost forecasting, can be assigned responsibilities regardless of size and/or type of project, has the ability to develop and cultivate close client relationships, displays a high level of professionalism and actively participates in industry organizations.

**Quick Response Group Manager** The Quick Response Group Manager must demonstrate leadership in safety performance and quality. Responsible for the projects and Project Managers in the QR group, including group financial responsibility. Must be proficient in the understanding, accuracy, and timely completion of job cost and group forecasting, have the ability to develop and cultivate close client relationships, displays a high level of professionalism, and actively participate in industry organizations. Bachelors of Science in Construction Management/Mechanical degree preferred.

**Service Sales Representative** Individual is responsible for the new project management contract sales, account management, sales within accounts assigned. Candidate must be dependable and responsible individual who can take direction and work with little supervision; personable, poised, mature and well spoken. Must have excellent verbal and written communication skills; flexible, detail-oriented, able to multi-task, and maintain confidentiality. Individual should demonstrate a working knowledge of Microsoft office software and be customer focused and sales driven with 5-years sales experience.





Name: \_\_\_\_\_  
 (Last) (First) (MI)

Status: Renewal \_\_\_\_\_ New Member \_\_\_\_\_ Address Change \_\_\_\_\_

Please circle preferred mailing address:  
 Home Address and Phone

Business Name, Address and Phone

\_\_\_\_\_  
 \_\_\_\_\_

p: \_\_\_\_\_  
 p: \_\_\_\_\_

Preferred email address: \_\_\_\_\_

Society Membership Number / Grade: \_\_\_\_\_

Name Tag (\$10.00) Paid? Y N

Name to appear on name tag as: \_\_\_\_\_

I would like to be contacted about serving on one of the following committees or functions (Please circle):

- |                       |                                      |
|-----------------------|--------------------------------------|
| A. Newsletter         | H. Research Fund Promotions          |
| B. Membership         | I. Monthly Meeting Programs          |
| C. Meeting Attendance | J. Publicity                         |
| D. Education          | K. Spouse's Night / Social Committee |
| E. Golf               | L. Colorado Engineering Council      |
| F. Chapter Historian  | M. General (Committee Help)          |
| G. Technical Seminars | N. Energy Committee                  |

Please mail this invoice and your check for \$50.00 (2007 / 2008 year) + \$10.00 payable to **Rocky Mountain Chapter ASHRAE** to the address listed below. ASHRAE will invoice you for both society and local dues every year following the first year.

Ms. Michelle Swanson, PE  
 Rocky Mountain Chapter ASHRAE Membership Promotion Chair  
 10055 W 43<sup>rd</sup> Ave, Wheat Ridge, CO 80033  
[michelle.swanson@me-engineers.com](mailto:michelle.swanson@me-engineers.com)





## RESOURCE PROMOTION



Special thanks goes out to Mike Fulton of Western Mechanical Solutions for sponsoring last month's (September) Research Raffle prize of a \$50 gift certificate to Home Depot. \$152.50 was raised by last month's raffle and that same amount will carry over as half the pot to this month's raffle. Our October meeting prize will be sponsored by Big Ass Fans. If you or your company is interested in sponsoring a raffle prize please contact myself or any of the other board members.

ASHRAE Research benefits us all from keeping our beer cold to improving the air we breathe. To conduct this research, ASHRAE Society has given us a goal this year to raise just under \$34,000 (or \$52.00 per member). The Resource Promotion committee and the chapter Board of Governors will be in touch with each of you soon to seek your support.

I would like to acknowledge Dave Olson for his individual contribution to ASHRAE Research.

To make a donation to ASHRAE Research fill out the form in the newsletter and forward it with a check made out to "ASHRAE Research". Checks made to ASHRAE Research are not cashable by the local chapter and have to be sent to society. The chapter will receive credit towards our 07-08 goal for those donations forwarded via the Resource Promotion Chair.

Thank you,

Scott Martin  
Resource Promotion Chair, President Elect  
ASHRAE, Rocky Mountain Chapter





# ASHRAE RESEARCH



*Don't Wait, Please Donate For The 2007-2008 Calendar Year*

Mail Check To:

**ASHRAE RESEARCH**

c/o Big Ass Fans  
10699 Riverbrook Circle  
Littleton, CO 80126

**Your contribution puts us closer to achieving**

our goal. Please send what you can today!

\*Individual contributions of \$100 or more and  
Corporate contributions of \$150 or more  
receive this year's Commemorative Coin  
and Honor Roll Contribution status.

Name: \_\_\_\_\_

Company: \_\_\_\_\_

Address: \_\_\_\_\_

TEL: \_\_\_\_\_

|            |         |          |          |          |
|------------|---------|----------|----------|----------|
| INDIVIDUAL | \$25.00 | \$50.00  | \$75.00  | \$100.00 |
| CORPORATE  | \$75.00 | \$100.00 | \$175.00 | \$250.00 |

Other: \_\_\_\_\_

Other: \_\_\_\_\_

Or contact Scott Martin @ 303.239.0909



## ROCKY MOUNTAIN CHAPTER





# ASHRAE RESEARCH DONOR LEVELS AND RECOGNITION

|                                                          |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                       |                                                                                       |                                                                                       |
|----------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| Presented Golden Circle Commemorative Sculpture          |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                       |                                                                                       |    |
| Individually recognized at President's Luncheon*         |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                       |                                                                                       |    |
| Invited to President's Luncheon*                         |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                       |                                                                                       |    |
| Invited to Board of Directors Luncheon*                  |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                       |                                                                                       |    |
| Listed on special Display at President's Luncheon*       |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                       |                                                                                       |    |
| Group photo published in spring issue of ASHRAE Insights |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                       |                                                                                       |    |
| Receives personalized shadowbox plaque                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                       |    | -----                                                                                 |
| Listed on RP Display in Registration                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |   |   |   |
| Receives Gold ASHRAE Commemorative Coin & Plaque         |                                                                                     |                                                                                     |                                                                                     |                                                                                     |  |  |  |
| Receives Silver ASHRAE Commemorative Coin & Plaque       |                                                                                     |                                                                                     |                                                                                     |  | -----                                                                                 | -----                                                                                 | -----                                                                                 |
| Receives Bronze ASHRAE Commemorative Coin & Plaque       |                                                                                     |                                                                                     |  | -----                                                                               | -----                                                                                 | -----                                                                                 | -----                                                                                 |
| Receives Antique ASHRAE Commemorative Coin & Plaque      |                                                                                     |  | -----                                                                               | -----                                                                               | -----                                                                                 | -----                                                                                 | -----                                                                                 |
| Receives blue desktop coin holder                        |  | -----                                                                               | -----                                                                               | -----                                                                               | -----                                                                                 | -----                                                                                 | -----                                                                                 |
| Listed in annual Investor Honor Roll                     |  |  |  |  |  |  |  |
|                                                          | Honor Roll Donor<br>\$150-\$249                                                     | Major Donor – Antique<br>\$250-\$499                                                | Major Donor – Bronze<br>\$500-\$999                                                 | Major Donor – Silver<br>\$1000-\$2499                                               | ASHRAE Associate<br>\$2500-\$4999                                                     | ASHRAE Partner<br>\$5000-\$9999                                                       | Golden Circle Donor<br>\$10,000 +                                                     |

\* ASHRAE Winter Meeting



**BEC FALL SEMINAR - WEDNESDAY, OCT. 10, 2007**

# **UNCOVERING COLORADO'S BUILDING ENCLOSURE ISSUES**

**8 AM - NOON**

(7:30 AM - REGISTRATION & REFRESHMENTS)

**TIVOLI STUDENT UNION - ROOM 320 A  
9TH STREET AT AURARIA PARKWAY  
DENVER, CO 80204**

MAP AT TIVOLI.ORG

3RD FLOOR NEAR ATRIUM

PEPSI CENTER / ELITCH GARDENS LIGHT RAIL STATION

KEITH BOYER (CENTRIA)

THE PHYSICS OF BUILDING  
ENCLOSURE, COLORADO BASICS

ED KAMMERER, AIA (TECHNISCAN)  
DAVE DAVIS, AIA (TECHNISCAN)  
GREG GRAVES (TECHNISCAN)

ROOF PROBLEMS  
AND THEIR DETECTION

BILL BURGER (WJE)  
MIKE DUNCAN (WJE)

WATER LEAKAGE  
THROUGH WALLS  
AND WINDOWS

BOB BARRETT (B2CE)

STEEL STUDS... EXPOSED!!  
(CONDENSATION & THERMAL PROBLEMS  
IN STEEL FRAMED BUILDINGS)

LOREN FLICK (BC&E)

BELOW-GRADE WATERPROOFING  
WHAT SEEMS TO WORK  
AND WHAT DOESN'T

REGISTRATION, BEC FALL SEMINAR (3.5 HSW AIA LU'S)

DEADLINE - FRIDAY, SEPTEMBER 28, 2007

\_\_\_\_\_ - \$25 (\$10 WITH STUDENT ID) PARKING FREE WITH VALIDATION AT SEMINAR

NAME - \_\_\_\_\_ AIA MEMBER NUMBER - \_\_\_\_\_

FIRM - \_\_\_\_\_ CERTIFICATE NEEDED - \_\_\_\_\_

ADDRESS - \_\_\_\_\_

PHONE - \_\_\_\_\_ FAX - \_\_\_\_\_ E-MAIL - \_\_\_\_\_

PLEASE CHECK PAYMENT METHOD:

\_\_\_\_\_ CHECK (PAYABLE TO AIA COLORADO) \_\_\_\_\_ VISA \_\_\_\_\_ MASTERCARD \_\_\_\_\_ AMEX

TOTAL AMOUNT ENCLOSED - \_\_\_\_\_

CARD NUMBER - \_\_\_\_\_ CVV2 - \_\_\_\_\_ EXP. DATE - \_\_\_\_\_

BILLING ADDRESS ON CARD - \_\_\_\_\_

NAME ON CARD - \_\_\_\_\_

SIGNATURE - \_\_\_\_\_

CANCELLATIONS AND/OR MISSED SEMINAR WILL NOT RECEIVE A REFUND

FAX COMPLETED FORM TO: 303.446.0066 OR MAIL TO: AIA COLORADO  
1515 ARAPAHOE ST. 1-110, DENVER, CO 80202 - PHONE - 303.446.2266

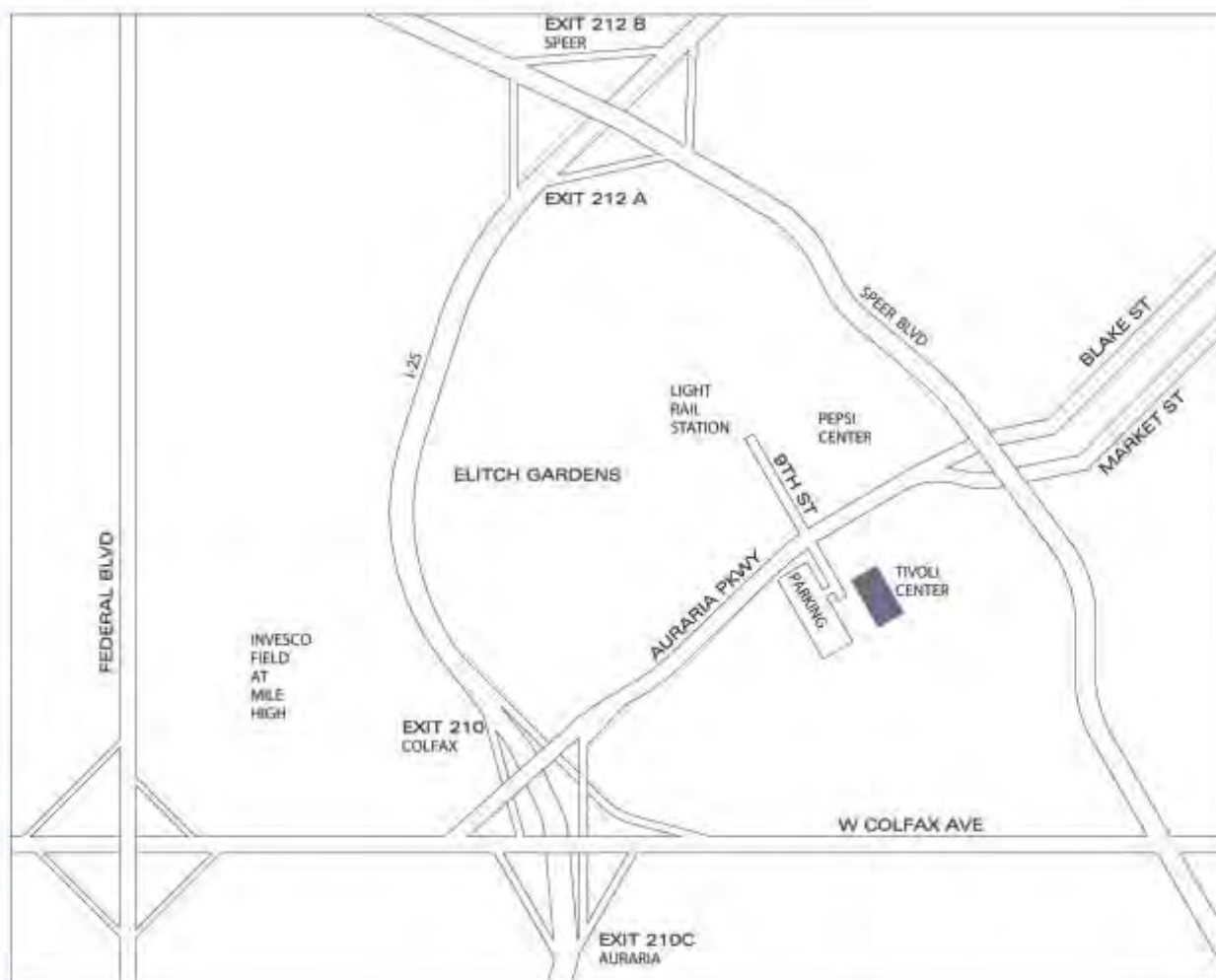
# **BEC FALL SEMINAR - WEDNESDAY, OCT. 10, 2007** 8 AM - NOON

**TIVOLI STUDENT UNION - ROOM 320 A**  
**9TH ST. AT AURARIA PARKWAY**  
**DENVER, CO 80204**

3RD FLOOR NEAR ATRIUM

FREE PARKING WITH VALIDATION (AT REGISTRATION)

MAP AT [TIVOLI.ORG](http://TIVOLI.ORG)  
PEPSI CENTER / ELITCH GARDENS LIGHT RAIL STATION



**DIRECTIONS:**

**SOUTH ON I-25: TAKE EXIT 212**  
**LEFT ON SPEER BLVD.**  
**RIGHT ON AURARIA PKWY.**  
**LEFT ON 9TH ST.**  
**RIGHT INTO PARKING**

**NORTH ON I-25: TAKE EXIT 210**  
**MERGE ONTO AURARIA PKWY.**  
**RIGHT ON 9TH ST.**  
**RIGHT INTO PARKING**



SPONSORS





HOLLAND & HART<sup>LLP</sup>  
THE LAW OUT WEST<sup>®</sup>



present

# Building GREEN CONFERENCE & EXPO COLORADO

October 17, 2007

7:15 am – 12:00 noon • Denver Athletic Club, Grand Ballroom • 1325 Glenarm Place, Denver

IN ASSOCIATION WITH

D O M A N I  
BUILDING SUSTAINABILITY



M-E ENGINEERS, INC.



TRADE  
ASSOCIATION  
SPONSOR



## WHO SHOULD ATTEND

Developers, investors, owners, brokers, tenants, property managers, contractors, architects, engineers, land planners, lenders.

### 7:15 – 7:45 a.m.

Registration, Continental Breakfast and Networking

### 7:45 – 8:00 a.m.

#### Welcome and Opening Remarks

Marc Painter, Partner, Holland & Hart

### 8:00 a.m. – 12:00 p.m.

#### Opening Keynote Address:

Mayor John Hickenlooper or  
Michele Weingarten, Director, Mayor's  
Greenprint Denver Office (unconfirmed)

#### Why Build Green? Financial incentives, rebates, grants, operational savings...

Lyla Gambow, CPM, Senior Vice President, Property Management, Transwestern  
John Hereford, Principal, Hereford Capital Advisors  
Brian Levitt, President, Hampton Development Company

#### The Latest in Design, Construction & Engineering Technology

Mark Kieffer, Principal, Norris Design  
Speaker TBD, JE Dunn Construction Company  
Michael Brendle, Principal, RNL  
Ted Prythero, Principal, M-E Engineers  
Moderator: William Sarni, Chief Executive Officer, DOMANI

#### Developer Panel – Challenges, investment strategy, user demand, short-term investment vs. long-term payoff, green construction costs...

Dean Barber, Vice President, Commercial & Mixed-Use Development, McWhinney Enterprises  
Craig Carlson, Principal, Carlson Parkhill LLC  
Jay Despard, Project Manager, Hines Interests  
T. Amory Host, Chairman & President, Peak Properties & Development Corp.  
Rich McClintock, President, Westfield Development  
Susan McFaddin, LEED® AP, Ph.D., Co-Developer, Seven Generations, LLC  
Matthew Stokes, Development Director, Continuum Partners LLC  
George Swintz, Vice President of Asset Management/Leasing, Corporate Office Properties Trust  
Ben Weeks, Principal, Aardex LLC  
Moderator: Beat U. Steiner, Partner, Holland & Hart

#### Closing Keynote Address

Chuck Sullivan, Managing Director of North American Capital Management, ProLogis  
TOPIC: Green Building in Industrial Real Estate

#### Closing Remarks

Marc Painter, Partner, Holland & Hart

### Space is limited to 500 • Register NOW

\$65 per person (includes continental breakfast & materials)

Please log on to [www.crej.com](http://www.crej.com), scroll down to the bottom of the Home Page and click on the Building Green Colorado Conference and then click on Register for Event Online.

Payment must accompany registration. Makes checks payable to: Colorado Real Estate Journal,

1630 Welton Street, Suite 300, Denver, CO 80202

Visa, MasterCard and American Express accepted

A full credit will be made if you cancel more than five days prior to the conference.

Earn four hours of continuing education credit.



# WHAT IS YOUR COMPANY'S "GREEN STRATEGY"?



## FIRST CLASS

Chapter may not act for Society. Expressions,  
opinions, and comments within this newsletter should  
not be taken as those of the Chapter or Society.

Rocky Mountain Chapter of ASHRAE  
CFM Company  
c/o Adam Bishop  
1440 South Lipan St.  
Denver, CO 80223-3411



## ACTIVITIES CALENDAR



For membership info or change of address contact: Michelle Swanson • [michelle.swanson@me-engineers.com](mailto:michelle.swanson@me-engineers.com)

October 03, 2007      Rocky Mountain ASHRAE Chapter Meeting  
“Space Air Distribution” The Curtis Hotel

October 10, 2007      BEC Fall Seminar - Denver

October 17, 2007      Building Green Conference & Expo - Denver

August 13-18, 2008      Convention of Regional Chairs Denver

Visit the new Rocky Mountain ASHRAE website

[www.rockymtnashrae.com](http://www.rockymtnashrae.com)



NEWSLETTER OF THE ROCKY MOUNTAIN CHAPTER  
AMERICAN SOCIETY OF HEATING, REFRIGERATING, AND AIR-CONDITIONING ENGINEERS, INC.

Volume 49, Number 3

November 2007

Editor: Adam Bishop



## NOVEMBER MEETING



Visit the new Rocky Mountain ASHRAE website: [www.rockymtnashrae.com](http://www.rockymtnashrae.com)

**Date:** November 7, 2007

**Cost:** Rocky Mtn Chapter Members-\$25\*  
\*With Reservations Made Before Monday Noon

**Dinner Location:** The Curtis  
1405 Curtis Street  
Denver, CO 80202  
(Downtown, Corner of 14<sup>th</sup> & Curtis)

Guests, Non-members or Without Reservation - \$30  
Students - \$20

**RSVP:** Justin Dunkin  
E-mail: [justind@cfmcompany.com](mailto:justind@cfmcompany.com)

**Time:** 5:30 Social Hour (Curtis)  
6:30 Dinner (Curtis)  
7:00 Program Begins (Curtis)

*The Curtis has on site parking for \$8.00. It is also just a couple of blocks away from the Convention Center stop of the Light Rail.*



## NOVEMBER PROGRAM



### **Cleanroom HVAC Systems: Ten Easy Steps to Good Mechanical Design**

*Vincent Sakraida, PE, LEED AP  
Merrick & Company, Aurora, CO*

This presentation will present the step by step process of designing a cleanroom mechanical system. Vince's presentation will provide some basic information on particulate contamination, contamination sources, HEPA filters, and cleanroom classifications. Taking this basic information, the presentation will go through the ten steps to good cleanroom HVAC system design including material/people flows, space cleanliness classification, space air pressure relationships, space supply air flow for each cleanliness classification, space air exfiltration calculations, space air flow balancing, HVAC system zoning, HVAC system selection options, HVAC system sequence of operation, and cleanroom energy saving measures.

Vincent Sakraida, PE, LEED AP, has over 20 years experience in the design, construction, and operation of cleanrooms for pharmaceutical, medical device, electronic, plastic, and health care industries. Vince's cleanroom experience includes designing cleanrooms with cleanliness classifications of 1 (ISO 3); 10 (ISO 4); 100 (ISO 5); 1,000 (ISO 6); 10,000 (ISO 7); and 100,000 (ISO 8). He has completed over 100 cleanroom projects. Vince has presented on various cleanroom topics at various national conferences including Cleanroom East 2004, LABS21 2004, and LABS21 2006. Vincent Sakraida is a principle mechanical engineer for Merrick & Company in Aurora where he designs high containment laboratories for National Institute of Health and the Dept. of Defense.





# ROCKY MOUNTAIN ROSTER



President .....**Brian Lynch** .....blynch@bigassfans.com

President Elect .....**Scott Martin**.....smartin@rmhgroup.com

Vice President .....**Jeremy Hollands**.....jhollands@catorruma.com

Secretary .....**Justin Dunkin**.....justind@cfmcompany.com

Treasurer .....**Ken Urbanek** .....kurbanek@mkkeng.com

Newsletter Editor .....**Adam Bishop**.....adamb@cfmcompany.com

Membership .....**Michelle Swanson**.....michelle.swanson@me-engineers.com

Refrigeration .....**Dave Rodenberg**.....drodenberg@long.com

Historian .....**Jon Rundquist** .....Jonathan.E.Rundquist@jci.com

Technology Transfer .....**Ken Urbanek** .....kurbanek@mkkeng.com

Resource Promotions .....**Scott Martin**.....smartin@rmhgroup.com

Web Master .....**Kyle Manske** .....kmanske@comfortsystemsusa.com

Education Chairman .....**Kevin Ainsworth** .....kainsworth@mcgrath-inc.com

Director .....**Mike Fulton** .....mfulton@westernmechanicalsolutions.com

Director .....**Kevin Ainsworth** .....kainsworth@mcgrath-inc.com

Past President .....**Kevin Parrot**.....KevinP@trinity-mechanical.com





# PRESIDENT'S MESSAGE



## **Sometimes If It Isn't Broke, Fix It Anyway.**

It looks like our move to The Curtis Hotel worked out pretty well. We had a great meeting last month and would like to thank Dan Int-Hout for being our speaker. He put together a great presentation that was both entertaining and educational.

We will be meeting again at the Curtis Hotel this month and in December. However, as we try to figure out new ways to reach out to our members, we are entertaining a few new thoughts and would like your feedback. Traditionally we have always had our meetings in the evenings, but have considered holding a few meetings over the lunch hour. Many other chapters have had great attendance holding their meeting during this time. What are your thoughts? Please let us know. We also hope to arrange a few meetings in the Fort Collins area to reach out to our northern members. If you have an interest in this, please send me a message or give me a call. Lastly, we have pulled together a Sustainable Engineering Committee that will be organizing additional events each month, in addition to our dinner meeting. These are just a few ideas we are hoping to run with, to better reach out to our members.

As always, if there are any topics you want me to cover in the President's Message, send me an email or give me a call.

Thanks!

Brian Lynch  
President





# RESOURCE PROMOTION



I would like to thank Brian Lynch of Big Ass Fans for donating last months dinner meeting raffle prize of a \$50 gift card to Bass Pro Shops. \$90.50 was raised by the raffle last month. Adding it to the previous months total \$243 will carry over as half the pot to this month's raffle. The November raffle will be sponsored by the CFM Company. Our December meeting prize will be sponsored by York A Johnson Controls Company. If you or your company is interested in sponsoring a raffle prize please contact me.

ASHRAE Research benefits us all from keeping our beer cold to improving the air we breathe. To conduct this research, ASHRAE Society has given us a goal this year to raise just under \$34,000 (or \$52.00 per member). The Resource Promotion committee and the chapter Board of Governors will be in touch with each of you soon to seek your support.

I would like to thank the following individuals for their contributions to ASHRAE Research: Dave Olson, John Helin, Robert Koenig, Jere Hamilton, Ronald Thomas, Bob Schlacter, Jock Griffith, Vernon Smith, John Morris, Edward White, Kevin Ainsworth, and Michael Haughey.

I would like to thank the following organizations for their contribution to ASHRAE Research: Engineered Solutions and McNevin Company.

The inaugural Northern ASHRAE Golf Tournament was a success as it raised \$1369 for ASHRAE Research. First place team was won by the Trane team of Matt Horner, Chad Sokolyk, Mike Weimer and Justin Reynolds. Second place went to the US Engineering team of Dave Archuleta, Wes Green, Art Gallegos and Shawn Meyer. The longest drive was won by Mike Harvey. The closest to the pin winners were Steve Lee and Wade Johnson. Thanks to all that participated. We are looking forward to making next years event even bigger and better.

Please help support ASHRAE's mission. ASHRAE Research donations can be made online at [https://www.ashrae.org/aboutus/resource\\_promotion.asp](https://www.ashrae.org/aboutus/resource_promotion.asp) . Please be sure to include Rocky Mountain in the field for "Assigned ASHRAE Chapter". You can also make a donation to ASHRAE Research by filling out the form in the newsletter and forward it to myself with a check made out to "ASHRAE Research". Checks made to ASHRAE Research are not cashable by the local chapter and are sent to society. Additionally, when paying dues to society there is a line on the membership invoice which can be used.

Year to date we have raised \$5,900 of the \$34,000 goal.

Thank you,

Scott Martin  
Resource Promotion Chair, President Elect  
ASHRAE, Rocky Mountain Chapter





# GREEN OUR MEETINGS



We had 30% of our meeting attendees use public transportation last month. Again we will offer free raffle tickets to any member who presents a ticket from using public transportation. Just show us your ticket from the light rail or bus when you check in and we will give you one free raffle ticket per meeting. This month the meeting is at The Curtis Hotel, just a couple of blocks from the Convention Center Light Rail stop. Visit [www.rtd-denver.com](http://www.rtd-denver.com) for system maps and times.

Lastly, ASHRAE President Kent Peterson has started a new blog which allows him to share what is happening in the ASHRAE community. It also provides you an opportunity to comment on HVACR industry global trends and possibilities as ASHRAE transitions toward a sustainable built environment. Go to <http://cms.ashrae.biz/blog/> to take a look.





# HISTORY



Five years ago this month, November 6, 2002, the chapter took a tour of the newly constructed DU Performing Arts Center. Discussions followed covering the challenges of design and construction, namely the use of an under Floor air distribution system. This was a fairly new concept at the time. Representatives from the Consulting Engineer, Mechanical Contractor and the DU Facilities Department were there to take questions.





## The Latest in Technical, Energy, and Government Activities

### Updated Design Manual Published by ASHRAE

ATLANTA An updated Air-Conditioning Systems Design Manual, which bridges the gap between engineering theory and practical application, is available from ASHRAE.

The manual was first published in 1993 to assist entry-level engineers in the design of air-conditioning systems. The update includes new materials dealing with design process, indoor air quality and green design.



Changes to the guide include addition of information regarding:

- The various stages of the design process (conceptual design, schematic design and design development) and the role of HVAC&R systems design in each stage;
- The commissioning process;
- Indoor air quality, now noted as a major design intent for HVAC systems design;
- Green design for HVAC systems in high-performance buildings.

It also contains International System of Units (SI) throughout.

The book is the second in the ASHRAE Professional Series, published jointly by ASHRAE and Butterworth-Heinemann/Elsevier.

For more information please refer to the ASHRAE website at [www.ashrae.org](http://www.ashrae.org).

### ASHRAE Strives to Provide Advanced Energy Savings by 2010

ATLANTA Declaring that the building industry must improve building energy efficiency, ASHRAE is striving to increase building energy efficiency in Standard 90.1.

ASHRAE is looking to achieve 30 percent energy savings in the 2010 standard compared to ANSI/ASHRAE/IESNA Standard 90.1-2004, Energy Standard for Buildings Except Low-Rise Residential Buildings.

ASHRAE is committed to continually improving building energy performance. The savings are part of ASHRAE's goal to achieve market-viable net-zero energy buildings by 2030.

The plan to achieve 30 percent savings in 2010 is based on an average for all building types and climate weighted energy cost savings and may not be achieved for every building in every climate. Other elements of the plan are:

- Estimates of energy savings improvement be based on the total annual energy cost of the facility
- Energy savings estimated on ongoing basis
- Improvement calculations made in conjunction with technical resources made available by the Department of Energy.

If you have any questions regarding Technical, Energy, and Government Activities with respect to ASHRAE please contact local Chapter Technology Transfer Committee Chair Ken Urbanek via e-mail at [kurbanek@mkkeng.com](mailto:kurbanek@mkkeng.com).





# NATIONAL ASHRAE SCHOLARSHIP PROGRAM



The ASHRAE Scholarship Program is designed to encourage and assist in the education of men and women pursuing a career in the field of heating, ventilating, air conditioning and refrigeration (HVAC&R) through its granting of scholarships and fellowships.

The program also serves the public interest by aiding in the education of men and women to become qualified to practice as engineers in the HVAC&R field.

For more information and scholarship applications please visit the ASHRAE website at <http://www.ashrae.org>



## MEMBERSHIP PROMOTION



Welcome to November's edition of "The Membership Promotion Page." The chapter's roster has been updated please take a close look at the roster located at [www.rockymtnashrae.com](http://www.rockymtnashrae.com) for the following:

1. If you are a member of ASHRAE (student, associate, member, etc.) your name should be included within the roster.
2. If you have requested that your contact address be your residential address, I have only included your name and the city and state of your residence.
3. If you have requested that your contact address be your business address, I have included your name, the business name and mailing address, and your email address.
4. If a "0" appears where your email address should be, ASHRAE does not have an email address for you assuming your contact address is your business address.
5. Your name appears in the same format ASHRAE has it recorded. I have not attempted to add "Dr", "PE", "PhD" or other pertinent information that ASHRAE does not have.
6. If any of your information is incorrect, or if you want changes made to your information, please send an email to [michelle.swanson@me-engineers.com](mailto:michelle.swanson@me-engineers.com) and I will make the requested changes.
7. If you have been omitted from this list and want to know why, please send an email to [michelle.swanson@me-engineers.com](mailto:michelle.swanson@me-engineers.com) and I will research why ASHRAE is not including you. Common reasons for omission include human error and unpaid ASHRAE membership dues.

Also please look around your company and contacts and let people know about the benefits of joining AHSRAE







# CRC ANNOUNCEMENT



## CRC 2008 Denver Colorado August 13<sup>th</sup> 18<sup>th</sup>

Good afternoon ASHRAE Members,

I have been asked to Chair the Convention of Regional Chairs (CRC) here in Denver and for those that have been involved in that process or have attended one of these events know that it takes a lot of effort of the local chapter to make this an enjoyable and successful event.

I am soliciting the general membership to ensure that everyone has an opportunity to participate. The kick off meeting for this will be the second or third week in January. Once I get responses of those interested I will send out a time and place where we will meet to move forward.

This commitment would require monthly meetings for approx an hour over lunch and as the event gets closer we would meet more frequently to ensure that all the details are covered.

Here are a few of the committees that are available so if you are interested in one over the other please inform me of your interest.

Banquet / Hotel Curtis Hotel is the location Banquet details needed

Companions - Hospitality Room, Sightseeing events, transportation Ensuring that they have a place to meet and events to attend.

Decorations Gift Baskets, Banners, etc.

Entertainment Coordinate Events on and off site.

Finance Budget reconciliation of income and expenses

Publicity Mailers, Printing, Photography, Interviews, Special Invitations, and other publicity items

Reception and Registration Welcoming Guest, Registration, Name badges, Pre-Registration, Meeting Venue and Identification Signs.

Social- Presidents Luncheon, Banquets, Awards Functions, Employers Recognition breakfast  
Technical Programs-Technical Talks, Panel Forums, Technical Tours, - Coordinating these events and speakers.

Transportation - Coordinate arrival of delegates and ensure adequate transportation is provided for all events.

Please respond via email to [john.d.stumpf@jci.com](mailto:john.d.stumpf@jci.com) for further details or to volunteer to make this the best CRC in decades.





# NOVEMBER EMPLOYMENT LISTINGS



Position: Mechanical Plans Review Engineer  
Company: City and County of Denver  
Web Site: [Denvergov.org](http://denvergov.org)  
Address: 201 W. Colfax Ave Dept 205, Denver, CO 80202

Contact: Danny Boncich  
Contact Phone: (720) 865-2828  
Contact Email: [danny.boncich@ci.denver.co.us](mailto:danny.boncich@ci.denver.co.us)

## More Info:

The City of Denver's Community Planning & Development Department is seeking a Mechanical Plans Review Engineer. Responsibilities include the review of building mechanical and plumbing construction documents for compliance to the Denver Building Code for new and existing buildings. Requires a BS in Mechanical Engineering; plus 3 years of professional mechanical construction engineering experience working as a lead project engineer. Driver's license and Professional Engineering License is required at time of application. International Code Conference Plans Examiner Certification is required by the end of the probationary period. Applicants must apply on-line at [www.denvergov.org](http://www.denvergov.org)

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Position(s): Project Manager & Project Engineer  
Company: Engineering Economics, Inc.  
Web Site: [www.eeiengineers.com](http://www.eeiengineers.com)  
Main Phone: 303-239-8700  
Fax: 303-239-9982  
Address: 780 Simms St, Suite 210  
Golden, CO 80401  
Contact: Human Resources  
Contact Phone: 303-239-8700  
Contact Email: [HR@eeiengineers.com](mailto:HR@eeiengineers.com)

## More Info:

Our growing client list has created **Project Engineer and Project Management** opportunities. We are presently seeking proven mechanical engineers and leaders, dedicated to serving our clients and protecting their interests. We seek professionals capable of leading our projects to great achievements. If you have those qualities, we want you on our Team! Our unique culture encourages independence and an entrepreneurial spirit, while providing team support, great benefits and financial rewards!





# NOVEMBER EMPLOYMENT LISTINGS



Successful **Project Engineers and Project Managers** have the following:

- BSME (or equivalent)
- Proven project management skills.
- Demonstrated business acumen.
- Experience in mechanical (HVAC) system/controls design and construction.
- Experience in facility engineering, planning, peer review, and/or Cx services.
- PE or EIT (preferred)

EEI specializes in building commissioning, LEED® commissioning, facility assessment, planning, and M/E/P consulting services.

To learn more, go to [www.eeiengineers.com](http://www.eeiengineers.com)

**To apply send your resume to [HR@eeiengineers.com](mailto:HR@eeiengineers.com)**

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Position(s): Mechanical Engineers  
Company: E M C Engineers, Inc.  
Web Site: [www.emcengineers.com](http://www.emcengineers.com)  
Main Phone: 303-974-1200  
Fax: 303-974-1239  
Address: 143 Union Blvd., Suite 350  
Lakewood, CO 80228  
Contact: Tom Poeling  
Contact Phone: 303-974-1200  
Contact Email: [tpoeling@emcengineers.com](mailto:tpoeling@emcengineers.com)

#### Background:

EMC Engineers has 31 years experience in making buildings work better. Substantial and sustained growth in all of our core technical service areas has resulted in multiple opportunities for professional positions in energy engineering, high performance MEP design, commissioning new construction and retro-commissioning existing buildings. Our clients achieve significant reductions in operating costs and carbon footprint while increasing their productivity and performance.

EMC is a leader in delivering high performance building solutions. We have strong credentials in mechanical, electrical, and control systems for new construction and retrofit/modernization, energy engineering and commissioning. We are a national firm with 6 offices, appropriately diversified, and provide outstanding professional opportunities, un-matched benefits, and an opportunity to apply your engineering talent to really “make a difference.” Positions are open in Denver, Salt Lake City and Irvine for:





# NOVEMBER EMPLOYMENT LISTINGS



**Junior Mechanical Engineers:** B.S. in Mechanical or Architectural Engineering plus 0 to 3 years of work experience. Successful candidates require background design (or analysis) of mechanical building systems (HVAC, plumbing, temperature controls). Candidate must be willing to accept a wide variety of engineering tasks, including site investigations, design, energy modeling, and system testing.

**Staff Mechanical Engineers:** B.S. in Mechanical or Architectural Engineering or comparable management or technical experience for non-degreed applicants. Successful candidates for Cx and Retro-Cx positions require background in commissioning and/or equipment testing and troubleshooting, including energy engineering and energy conservation for mechanical building systems (HVAC, plumbing, temperature controls). Successful candidates for design positions require demonstrated capability in design of HVAC, plumbing and controls systems. Design positions include energy efficiency analysis. Familiarity with USBGC LEED program and experience for high performance building projects is a plus.

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Positions: Mechanical & Electrical Engineers  
Company: Caveo, Inc. dba Caveo Consulting Engineers  
Website: [www.caveoeng.com](http://www.caveoeng.com)  
Main Phone: (720) 200-5955  
Fax: (720) 200-5530  
Address: 6143 S. Willow Drive, Suite 405  
Englewood, CO 80215

Contact: Susan Rookstool  
Contact Phone: (720) 200-5955  
Contact Email: [srookstool@caveoeng.com](mailto:srookstool@caveoeng.com)

**More Information:**

Caveo Consulting Engineers, a growing MEP firm providing consulting engineering services exclusively for healthcare, has immediate openings for mid and upper level mechanical and electrical engineers who desire to make a living while making a contribution to the growing healthcare community. Caveo offers an excellent benefit package that includes medical and 401(k) plan as well as Friday afternoons off, a flexible and friendly work environment, and the opportunity to make a difference in a growing company. Please send resumes and requests for additional information to [srookstool@caveoeng.com](mailto:srookstool@caveoeng.com) and visit [www.caveoeng.com](http://www.caveoeng.com).

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# NOVEMBER EMPLOYMENT LISTINGS



Position(s): HVAC Project Engineer or Systems Designer  
Company: Innovative Mechanical Systems, Inc.  
Web Site: [www.innovativemechanicalsystems.com](http://www.innovativemechanicalsystems.com)  
Main Phone: 720-890-1080  
Fax: 720-890-1780  
Address: 1500 Cherry Street, Suite A, Louisville, CO 80027

Contact: Bonnie Baas  
Contact Phone: 720-890-1080  
Contact Email: [bonnie@innmechsys.com](mailto:bonnie@innmechsys.com)

## More Info:

Innovative Mechanical Systems, Inc., a Mechanical Design/Build Contractor with in-house engineering department seeks HVAC Project Engineer or Systems Designer. Applicants must be proficient in HVAC systems design including load calculations, equipment selection, hydronic system sizing, mechanical systems layout and drawing coordination. Knowledge of AutoCAD, local codes and a minimum of 5 years experience required; knowledge of Autodesk Building Systems a plus. Excellent salary and benefit package including employer matching 401(k). Send resume to Attn: Engineering, Innovative Mechanical Systems, Inc., 1500 Cherry Street, Suite A, Louisville, CO 80027 or e-mail to [bonnie@innmechsys.com](mailto:bonnie@innmechsys.com)

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Position(s): Mechanical Engineer, Mechanical Designer, Electrical Engineer  
Company: JBA Consulting Engineers  
Web site: [www.jbace.com](http://www.jbace.com)  
Phone: 303-907-4285  
Address: 13952 Denver West Parkway, Suite 250, Lakewood, CO 80401  
Contact: Bryan Moen, P.E.  
Email resume in confidence to [bmoen@jbace.com](mailto:bmoen@jbace.com) for Denver area job openings or [jobs@jbace.com](mailto:jobs@jbace.com) for openings in Las Vegas and Costa Mesa, CA

JBA Consulting Engineers is a multi-discipline national engineering firm specializing in the design and implementation of HVAC, plumbing, electrical, telecommunications, acoustics, audio/visual, life safety, and energy conservation design. JBA Consulting Engineers was founded in 1966 and has provided professional consulting and engineering services for hotels, casinos, educational facilities, judicial facilities, hospitals, major airport expansions, office buildings, retail, and multi-use facilities. JBA Currently has positions available in Denver, Las Vegas, and Costa Mesa, CA and is seeking qualified employees to staff and share in an exciting opportunity to work with a progressive global-minded firm with tremendous growth potential. JBA offers excellent benefits with bonus opportunities available. Salary DOE.





# NOVEMBER EMPLOYMENT LISTINGS



## Mechanical Engineer

Provide design and supervision of design of others for plumbing and HVAC systems. Bachelors Degree in Architectural or Mechanical Engineering from an accredited university or equivalent experience. Proven ability to perform the duties specified with prior project experience at an equivalent level of responsibility. Minimum 3 years experience. PE in Colorado or EIT with ability to obtain PE preferred.

## Mechanical Designer

Provide design for plumbing and HVAC systems. Proven ability to perform the duties specified with prior project experience at an equivalent level of responsibility. Minimum 3 years experience.

## Electrical Engineer

Provide design and supervision of design by others for power and lighting systems. Bachelors Degree in Architectural or Electrical Engineering from an accredited university or equivalent experience. Proven ability to perform the duties specified with prior project experience at an equivalent level of responsibility. Minimum 5 years experience. PE in Colorado or ability to obtain is preferred.

## Electrical Designer

Provide design for power and lighting systems. Proven ability to perform the duties specified with prior project experience at an equivalent level of responsibility. Minimum 3 years experience.

=====  
Position(s): Facilities Energy Management Engineer  
Company: City of Aurora  
Web Site: [www.auroragov.org](http://www.auroragov.org)  
Phone: 303-326-8163 or 303-326-8150  
Address: 13636 E. Ellsworth Avenue, Aurora, CO 80012  
Contact: Howard Kaplan, P.E.

## **Facilities Energy Management Engineer**

The City of Aurora is recruiting for an exciting newly established position. This individual will perform energy management and facilities repair/ construction program development for projects for over 120 City buildings. Conducts building energy audits. Helps develop electric and natural gas budgets for the City. Assignments provide for the application of independent judgment and initiative in the design and construction of projects to improve energy efficiency and environmental comfort in a full range of disciplines, including mechanical, electrical and structural improvements/ renovations. Oversees the application of LEED standards for new construction and renovation of existing buildings. Oversees the City's Energy Awareness Program. Qualifications: Bachelor's Degree in engineering or related field. EIT with 5 years of experience. LEED Accredited Professional Certification or ability to obtain certification within 6 months of employment. AutoCad a plus.





# NOVEMBER EMPLOYMENT LISTINGS



Position(s): various  
Company: Murphy Company  
Web Site: [www.murphynet.com](http://www.murphynet.com)  
Main Phone: 303-371-6600  
Fax: 303-371-6616  
Address: 3790 Wheeling Street, Denver CO 80239

Contact: Human Resources  
Contact Email: [denverjobs@murphy-den.com](mailto:denverjobs@murphy-den.com)

## Company Info:

Founded in 1907, Murphy Company performs construction and engineering work in the industrial, commercial, municipal and institutional construction and service markets. Murphy Company is licensed in 32 states and has performed work in 25 states. Murphy has set the standard for mechanical and industrial construction and engineering earning the distinction of being ranked 10th largest mechanical specialty contracting firm in the 2006 ENR/Engineering News-Record.

This is an opportunity to join a dynamic, growth-oriented company that offers a highly competitive compensation and excellent benefits package, along with opportunities for personal and professional development. For immediate consideration, please forward your resume and salary expectations via fax 303-371-6616 or email to [denverjobs@murphy-den.com](mailto:denverjobs@murphy-den.com). EOE

## **Energy Engineer**

Perform detailed building audits of MEP systems. Technical expert at identifying and quantifying energy and water conservation measures. Develop costs to implement measures, calculate energy baselines, estimate utility and maintenance savings. Will complete life cycle cost analysis, prepare and present proposals, assist project managers in implementation of recommendations. Engineering degree with 5-7 years experience in the energy management field related to electrical or HVAC systems, CEM certificate required. Controls system and lighting retrofit experience preferred.

## **Design Build Engineer**

Design-Build Engineer with experience at HVAC & Plumbing construction document production including calculations, layout, coordinate with other disciplines to include CAD drafting, survey of existing conditions and completion of construction drawings. The candidate should be interested in improving their understanding of the construction cost, constructability, and schedule implications of different design choices.

Bachelors of Science Engineering Degree and Colorado PE License required. Minimum of 10 years design experience and prior construction experience a plus.

## **Service Dispatcher**

Individual takes, dispatches and follows-up on service calls; provide purchase orders and job numbers for techs; assemble job costs for billing to include payroll, accounts payable, purchase orders, warehouse charges etc. for billing; set-up jobs in Accounting system; order uniforms and maintain effective professional communication with clients. Must be flexible, detail-oriented, able to multi-task and maintain confidentiality; demonstrate a working knowledge of Microsoft office software; previous dispatch experience is a must; previous construction experience preferred.







# NOVEMBER EMPLOYMENT LISTINGS



## **Quick Response Project Manager**

Candidate sought to manage overall job progress; conduct safety audits, evaluate hazard potentials on project, organize safety orientations, and distribute safety information; plus develop and maintain client relationships. College degree preferred, along with ability to use MS Office and QuickPen Estimating System. Understanding of sheet metal, HVAC, piping, plumbing and refrigeration systems required. Understanding and ability to perform conceptual design and layout of HVAC and plumbing systems also required

## **Senior Project Manager**

Candidate must demonstrate leadership in the area of safety performance, have achieved a level of experience above and beyond that of a typical Project Manager, must be proficient in the understanding, accuracy, and timely completion of job cost forecasting, can be assigned responsibilities regardless of size and/or type of project, has the ability to develop and cultivate close client relationships, displays a high level of professionalism and actively participates in industry organizations.

## **Quick Response Group Manager**

The Quick Response Group Manager must demonstrate leadership in safety performance and quality. Responsible for the projects and Project Managers in the QR group, including group financial responsibility. Must be proficient in the understanding, accuracy, and timely completion of job cost and group forecasting, have the ability to develop and cultivate close client relationships, displays a high level of professionalism, and actively participate in industry organizations. Bachelors of Science in Construction Management/Mechanical degree preferred.

## **Service Sales Representative**

Individual is responsible for the new project management contract sales, account management, sales within accounts assigned. Candidate must be dependable and responsible individual who can take direction and work with little supervision; personable, poised, mature and well spoken. Must have excellent verbal and written communication skills; flexible, detail-oriented, able to multi-task, and maintain confidentiality. Individual should demonstrate a working knowledge of Microsoft office software and be customer focused and sales driven with 5-years sales experience.

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Position(s): Mechanical Engineer, P.E. / Electrical Engineer, P.E.  
Company: ShafferBaucom Engineering & Consulting  
Web Site: sbengr.com  
Main Phone: 303.986.8200  
Fax: 303.986.8222  
Address: 7333 W. Jefferson Ave., Suite 230 Lakewood, CO 80235

Contact: Ellie Dugle  
Contact Phone: 303.986.8200





# NOVEMBER EMPLOYMENT LISTINGS



## More Info:

ShafferBaucom Engineering & Consulting is looking for a 5-8 year Mechanical Engineer, P.E. and a 5-8 year Electrical Engineer, P.E. to join our team. We provide an excellent and competitive benefit package including bonuses. Our firm works a 4.5 day work week with Friday afternoons off. We encourage you to visit our website [www.sbengr.com](http://www.sbengr.com). We provide both mechanical and electrical engineering services all over the Front Range area and the western slope. We take great pride in our team. We have great clients and interesting projects. Our firm promotes career growth and values everyone's contributions. Email your resume to [edugle@sbengr.com](mailto:edugle@sbengr.com).

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Position: Mechanical Engineer, HVAC/Plumbing Designer, Electrical Engineer  
Company: Cator, Ruma & Associates  
Website: [www.catorruma.com](http://www.catorruma.com)  
Main Phone: 303-232-6200  
FAX: 303-233-3701  
Address: 1550 Dover St., Suite 2  
Lakewood, Co 80215  
Contact: send resumes to [cra-resumes@catorruma.com](mailto:cra-resumes@catorruma.com)

## More Information:

### MECHANICAL ENGINEERS/DESIGNERS

Our office location is changing, but our commitment to quality engineering is not! Join our team as we move into our new building in Lakewood. Cator, Ruma & Associates has new/additional positions for MECHANICAL ENGINEERS AND DESIGNERS. Our MEP firm designs healthcare, educational and commercial facilities. We are also looking for AUTOCAD DESIGNERS AND ELECTRICAL ENGINEERS/DESIGNERS. We offer an excellent benefit package (salary, medical, 401K) and Friday afternoons off. Resumes to [cra-resumes@catorruma.com](mailto:cra-resumes@catorruma.com) or fax 303-233-3701. Visit [www.catorruma.com](http://www.catorruma.com).





# ROCKY MOUNTAIN CHAPTER





Name: \_\_\_\_\_  
 (Last) (First) (MI)

Status: Renewal \_\_\_\_\_ New Member \_\_\_\_\_ Address Change \_\_\_\_\_

Please circle preferred mailing address:  
 Home Address and Phone

Business Name, Address and Phone

\_\_\_\_\_  
 \_\_\_\_\_

p: \_\_\_\_\_  
 p: \_\_\_\_\_

Preferred email address: \_\_\_\_\_

Society Membership Number / Grade: \_\_\_\_\_

Name Tag (\$10.00) Paid? Y N

Name to appear on name tag as: \_\_\_\_\_

I would like to be contacted about serving on one of the following committees or functions (Please circle):

- |                       |                                      |
|-----------------------|--------------------------------------|
| A. Newsletter         | H. Research Fund Promotions          |
| B. Membership         | I. Monthly Meeting Programs          |
| C. Meeting Attendance | J. Publicity                         |
| D. Education          | K. Spouse's Night / Social Committee |
| E. Golf               | L. Colorado Engineering Council      |
| F. Chapter Historian  | M. General (Committee Help)          |
| G. Technical Seminars | N. Energy Committee                  |

Please mail this invoice and your check for \$50.00 (2007 / 2008 year) + \$10.00 payable to **Rocky Mountain Chapter ASHRAE** to the address listed below. ASHRAE will invoice you for both society and local dues every year following the first year.

Ms. Michelle Swanson, PE  
 Rocky Mountain Chapter ASHRAE Membership Promotion Chair  
 10055 W 43<sup>rd</sup> Ave, Wheat Ridge, CO 80033  
[michelle.swanson@me-engineers.com](mailto:michelle.swanson@me-engineers.com)





# ASHRAE RESEARCH



*Don't Wait, Please Donate For The 2007-2008 Calendar Year*

Mail Check To:

**ASHRAE RESEARCH**

c/o Big Ass Fans  
10699 Riverbrook Circle  
Littleton, CO 80126

**Your contribution puts us closer to achieving**

our goal. Please send what you can today!

\*Individual contributions of \$100 or more and  
Corporate contributions of \$150 or more  
receive this year's Commemorative Coin  
and Honor Roll Contribution status.

Name: \_\_\_\_\_

Company: \_\_\_\_\_

Address: \_\_\_\_\_

TEL: \_\_\_\_\_

|            |         |          |          |          |
|------------|---------|----------|----------|----------|
| INDIVIDUAL | \$25.00 | \$50.00  | \$75.00  | \$100.00 |
| CORPORATE  | \$75.00 | \$100.00 | \$175.00 | \$250.00 |

Other: \_\_\_\_\_

Other: \_\_\_\_\_

Or contact Scott Martin @ 303.239.0909



## ROCKY MOUNTAIN CHAPTER



# ASHRAE RESEARCH DONOR LEVELS AND RECOGNITION

|                                                          |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                       |                                                                                       |                                                                                       |
|----------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| Presented Golden Circle Commemorative Sculpture          |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                       |                                                                                       |    |
| Individually recognized at President's Luncheon*         |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                       |                                                                                       |    |
| Invited to President's Luncheon*                         |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                       |                                                                                       |    |
| Invited to Board of Directors Luncheon*                  |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                       |                                                                                       |    |
| Listed on special Display at President's Luncheon*       |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                       |                                                                                       |    |
| Group photo published in spring issue of ASHRAE Insights |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                       |                                                                                       |    |
| Receives personalized shadowbox plaque                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                       |    | -----                                                                                 |
| Listed on RP Display in Registration                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |   |   |   |
| Receives Gold ASHRAE Commemorative Coin & Plaque         |                                                                                     |                                                                                     |                                                                                     |                                                                                     |  |  |  |
| Receives Silver ASHRAE Commemorative Coin & Plaque       |                                                                                     |                                                                                     |                                                                                     |  | -----                                                                                 | -----                                                                                 | -----                                                                                 |
| Receives Bronze ASHRAE Commemorative Coin & Plaque       |                                                                                     |                                                                                     |  | -----                                                                               | -----                                                                                 | -----                                                                                 | -----                                                                                 |
| Receives Antique ASHRAE Commemorative Coin & Plaque      |                                                                                     |  | -----                                                                               | -----                                                                               | -----                                                                                 | -----                                                                                 | -----                                                                                 |
| Receives blue desktop coin holder                        |  | -----                                                                               | -----                                                                               | -----                                                                               | -----                                                                                 | -----                                                                                 | -----                                                                                 |
| Listed in annual Investor Honor Roll                     |  |  |  |  |  |  |  |
|                                                          | Honor Roll Donor<br>\$150-\$249                                                     | Major Donor – Antique<br>\$250-\$499                                                | Major Donor – Bronze<br>\$500-\$999                                                 | Major Donor – Silver<br>\$1000-\$2499                                               | ASHRAE Associate<br>\$2500-\$4999                                                     | ASHRAE Partner<br>\$5000-\$9999                                                       | Golden Circle Donor<br>\$10,000 +                                                     |

\* ASHRAE Winter Meeting



## FIRST CLASS

Chapter may not act for Society. Expressions,  
opinions, and comments within this newsletter should  
not be taken as those of the Chapter or Society.

Rocky Mountain Chapter of ASHRAE  
CFM Company  
c/o Adam Bishop  
1440 South Lipan St.  
Denver, CO 80223-3411



## ACTIVITIES CALENDAR



For membership info or change of address contact: Michelle Swanson • [michelle.swanson@me-engineers.com](mailto:michelle.swanson@me-engineers.com)

November 7-8    Advanced Facilities Management & Engineering  
Conference please visit [www.AFEC.biz](http://www.AFEC.biz)

August 13-18, 2008    Convention of Regional Chairs    Denver

Visit the new Rocky Mountain ASHRAE website

[www.rockymtnashrae.com](http://www.rockymtnashrae.com)





NEWSLETTER OF THE ROCKY MOUNTAIN CHAPTER  
AMERICAN SOCIETY OF HEATING, REFRIGERATING, AND AIR-CONDITIONING ENGINEERS, INC.

Volume 49, Number 4

December 2007

Editor: Adam Bishop



## DECEMBER MEETING



Visit the new Rocky Mountain ASHRAE website: [www.rockymtnashrae.com](http://www.rockymtnashrae.com)

**Date:** December 5, 2007

**Cost:** Rocky Mtn Chapter Members-\$25\*  
\*With Reservations Made Before Monday Noon

**Dinner Location:** The Curtis  
1405 Curtis Street  
Denver, CO 80202  
(Downtown, Corner of 14<sup>th</sup> & Curtis)

Guests, Non-members or Without Reservation - \$30  
Students - \$20

**RSVP:** Justin Dunkin  
E-mail: [justind@cfmcompany.com](mailto:justind@cfmcompany.com)

**Time:** 5:30 Social Hour (Curtis CASH BAR ONLY)  
6:30 Dinner (Curtis)  
7:00 Program Begins (Curtis)

*The Curtis has on site parking for \$8.00. It is also just a couple of blocks away from the Convention Center stop of the Light Rail.*



## DECEMBER PROGRAM



### Greenprint

The Program Manager for Greenprint Denver, Scott Morrissey will be presenting on what Greenprint means to the design professionals, building owners, contractors and suppliers working in the city of Denver.

Greenprint Denver was adopted by Mayor Hicklooper to provide a long term plan for Denver to become a leader in sustainable design and planning. Additionally Mayor Hickenlooper formally adopted the City's Climate Action Plan late this past October.

Scott will tell us what this means, and how it will affect us as we continue to design and develop within the Mile High City.



# ROCKY MOUNTAIN ROSTER



President .....**Brian Lynch** .....blynch@bigassfans.com

President Elect .....**Scott Martin**.....smartin@rmhgroup.com

Vice President .....**Jeremy Hollands**.....jhollands@catorruma.com

Secretary .....**Justin Dunkin**.....justind@cfmcompany.com

Treasurer .....**Ken Urbanek** .....kurbanek@mkkeng.com

Newsletter Editor .....**Adam Bishop**.....adamb@cfmcompany.com

Membership .....**Michelle Swanson**.....michelle.swanson@me-engineers.com

Refrigeration .....**Dave Rodenberg**.....drodenberg@long.com

Historian .....**Jon Rundquist** .....Jonathan.E.Rundquist@jci.com

Technology Transfer .....**Ken Urbanek** .....kurbanek@mkkeng.com

Resource Promotions .....**Scott Martin**.....smartin@rmhgroup.com

Web Master .....**Kyle Manske** .....kmanske@comfortsystemsusa.com

Education Chairman .....**Kevin Ainsworth** .....kainsworth@mcgrath-inc.com

Director .....**Mike Fulton** .....mfulton@westernmechanicalsolutions.com

Director .....**Kevin Ainsworth** .....kainsworth@mcgrath-inc.com

Past President .....**Kevin Parrot**.....KevinP@trinity-mechanical.com





# PRESIDENT'S MESSAGE



## **Past President Appreciation Night**

It is my honor to invite everyone to our annual ASHRAE Past President's Appreciation Night. This is the night we strive to show our appreciation every year to those who have held our highest office. These members have given several years of service to our chapter, over a period of 6-7 years, usually starting as a committee chair and progressing through the different positions (Editor, Treasurer, Secretary, VP of Programs, and President Elect in Charge of Resource Promotion). The commitment they have fulfilled is certainly not a small one.

I encourage you to come out and enjoy the presentation on Denver's Greenprint and help us thank our Past Presidents.

On a different note, I received a number of comments related to our plans to hold a lunch meeting. Our hope is that we can accommodate those that have evening conflicts but want to still come to meetings. We realize a number of members enjoy the evening meetings, so we plan to keep them going as well. Look for both a lunch meeting and dinner meeting to be held in February, if everything works out as we hope. Details will follow.

As always, if there are any topics you want me to cover in the President's Message, send me an email or give me a call.

Sincerely,

Brian Lynch  
Chapter President  
ASHRAE, Rocky Mtn Chapter  
303.346.8955





# RESOURCE PROMOTION



I would like to thank CFM Company for donating last months dinner meeting raffle prize of a \$50 gift card to the Tattered Cover Bookstore. \$83 was raised by the raffle last month. Adding it to the previous months totals \$331 will carry over as half the pot to this month's raffle. Our December meeting prize will be sponsored by York A Johnson Controls Company. If you or your company is interested in sponsoring a raffle prize please contact me.

ASHRAE Research benefits us all from keeping our beer cold to improving the air we breathe. To conduct this research, ASHRAE Society has given us a goal this year to raise just under \$34,000 (or \$52.00 per member). The Resource Promotion committee and the chapter Board of Governors will be in touch with each of you soon to seek your support.

I would like to thank the following individuals for their contributions to the 2007-08 ASHRAE Research Campaign: Dave Olson, Pieter van der Mersch, John Helin, Robert Koenig, Jere Hamilton, Ronald Thomas, Bob Schlacter, Jock Griffith, Vernon Smith, John Morris, Edward White, Kevin Ainsworth, Michael Haughey, Jeff Schomberg, Brian Lynch, Jeremy Hollands, Justin Dunkin, Ken Urbanek, and Adam Bishop.

I would like to thank the following organizations for their contribution to the 2007-08 ASHRAE Research Campaign: Engineered Solutions and McNevin Company.

Please help support ASHRAE's mission. ASHRAE Research donations can be made online at [https://www.ashrae.org/aboutus/resource\\_promotion.asp](https://www.ashrae.org/aboutus/resource_promotion.asp) . Please be sure to include Rocky Mountain in the field for "Assigned ASHRAE Chapter". You can also make a donation to ASHRAE Research by filling out the form in the newsletter and forward it to myself with a check made out to "ASHRAE Research". Checks made to ASHRAE Research are not cashable by the local chapter and are sent to society. Additionally, when paying dues to society there is a line on the membership invoice which can be used.

Year to date we have raised \$6,850 of the \$34,000 goal.

Thank you,

Scott Martin  
Resource Promotion Chair, President Elect  
ASHRAE, Rocky Mountain Chapter





# GREEN OUR MEETINGS



We had 30% of our meeting attendees use public transportation last month. Again we will offer free raffle tickets to any member who presents a ticket from using public transportation. Just show us your ticket from the light rail or bus when you check in and we will give you one free raffle ticket per meeting. This month the meeting is at The Curtis Hotel, just a couple of blocks from the Convention Center Light Rail stop. Visit [www.rtd-denver.com](http://www.rtd-denver.com) for system maps and times.

Lastly, ASHRAE President Kent Peterson has started a new blog which allows him to share what is happening in the ASHRAE community. It also provides you an opportunity to comment on HVACR industry global trends and possibilities as ASHRAE transitions toward a sustainable built environment. Go to <http://cms.ashrae.biz/blog/> to take a look.





# HISTORY



Six years ago this month was the last time that the Chapter mailed out the monthly newsletter without a special request. Hard to believe we've only been sending out newsletters via email for that long! As for the monthly presentation that evening, Ed Fronapfel from Professional Investigative Engineers, was there to talk about a case study. The study involved Structural Floor System and Crawl Space Ventilation. The night was also a time to honor and recognize our Past President's.



**When you've seen one shopping center, you've seen a mall.**





## The Latest in Technical, Energy, and Government Activities

### Updated Design Manual Published by ASHRAE

ATLANTA An updated Air-Conditioning Systems Design Manual, which bridges the gap between engineering theory and practical application, is available from ASHRAE.

The manual was first published in 1993 to assist entry-level engineers in the design of air-conditioning systems. The update includes new materials dealing with design process, indoor air quality and green design.



Changes to the guide include addition of information regarding:

- The various stages of the design process (conceptual design, schematic design and design development) and the role of HVAC&R systems design in each stage;
- The commissioning process;
- Indoor air quality, now noted as a major design intent for HVAC systems design;
- Green design for HVAC systems in high-performance buildings.

It also contains International System of Units (SI) throughout.

The book is the second in the ASHRAE Professional Series, published jointly by ASHRAE and Butterworth-Heinemann/Elsevier.

For more information please refer to the ASHRAE website at [www.ashrae.org](http://www.ashrae.org).

### ASHRAE Strives to Provide Advanced Energy Savings by 2010

ATLANTA Declaring that the building industry must improve building energy efficiency, ASHRAE is striving to increase building energy efficiency in Standard 90.1.

ASHRAE is looking to achieve 30 percent energy savings in the 2010 standard compared to ANSI/ASHRAE/IESNA Standard 90.1-2004, Energy Standard for Buildings Except Low-Rise Residential Buildings.

ASHRAE is committed to continually improving building energy performance. The savings are part of ASHRAE's goal to achieve market-viable net-zero energy buildings by 2030.

The plan to achieve 30 percent savings in 2010 is based on an average for all building types and climate weighted energy cost savings and may not be achieved for every building in every climate. Other elements of the plan are:

- Estimates of energy savings improvement be based on the total annual energy cost of the facility
- Energy savings estimated on ongoing basis
- Improvement calculations made in conjunction with technical resources made available by the Department of Energy.

If you have any questions regarding Technical, Energy, and Government Activities with respect to ASHRAE please contact local Chapter Technology Transfer Committee Chair Ken Urbanek via e-mail at [kurbanek@mkkeng.com](mailto:kurbanek@mkkeng.com).







# NATIONAL ASHRAE SCHOLARSHIP PROGRAM



The ASHRAE Scholarship Program is designed to encourage and assist in the education of men and women pursuing a career in the field of heating, ventilating, air conditioning and refrigeration (HVAC&R) through its granting of scholarships and fellowships.

The program also serves the public interest by aiding in the education of men and women to become qualified to practice as engineers in the HVAC&R field.

For more information and scholarship applications please visit the ASHRAE website at <http://www.ashrae.org>



## MEMBERSHIP PROMOTION



Welcome to November's edition of "The Membership Promotion Page." The chapter's roster has been updated please take a close look at the roster located at [www.rockymtnashrae.com](http://www.rockymtnashrae.com) for the following:

1. If you are a member of ASHRAE (student, associate, member, etc.) your name should be included within the roster.
2. If you have requested that your contact address be your residential address, I have only included your name and the city and state of your residence.
3. If you have requested that your contact address be your business address, I have included your name, the business name and mailing address, and your email address.
4. If a "0" appears where your email address should be, ASHRAE does not have an email address for you assuming your contact address is your business address.
5. Your name appears in the same format ASHRAE has it recorded. I have not attempted to add "Dr", "PE", "PhD" or other pertinent information that ASHRAE does not have.
6. If any of your information is incorrect, or if you want changes made to your information, please send an email to [michelle.swanson@me-engineers.com](mailto:michelle.swanson@me-engineers.com) and I will make the requested changes.
7. If you have been omitted from this list and want to know why, please send an email to [michelle.swanson@me-engineers.com](mailto:michelle.swanson@me-engineers.com) and I will research why ASHRAE is not including you. Common reasons for omission include human error and unpaid ASHRAE membership dues.

Also please look around your company and contacts and let people know about the benefits of joining AHSRAE





# CRC ANNOUNCEMENT



## CRC 2008 Denver Colorado August 13<sup>th</sup> 18<sup>th</sup>

Good afternoon ASHRAE Members,

I have been asked to Chair the Convention of Regional Chairs (CRC) here in Denver and for those that have been involved in that process or have attended one of these events know that it takes a lot of effort of the local chapter to make this an enjoyable and successful event.

I am soliciting the general membership to ensure that everyone has an opportunity to participate. The kick off meeting for this will be the second or third week in January. Once I get responses of those interested I will send out a time and place where we will meet to move forward.

This commitment would require monthly meetings for approx an hour over lunch and as the event gets closer we would meet more frequently to ensure that all the details are covered.

Here are a few of the committees that are available so if you are interested in one over the other please inform me of your interest.

Banquet / Hotel Curtis Hotel is the location Banquet details needed

Companions - Hospitality Room, Sightseeing events, transportation Ensuring that they have a place to meet and events to attend.

Decorations Gift Baskets, Banners, etc.

Entertainment Coordinate Events on and off site.

Finance Budget reconciliation of income and expenses

Publicity Mailers, Printing, Photography, Interviews, Special Invitations, and other publicity items

Reception and Registration Welcoming Guest, Registration, Name badges, Pre-Registration, Meeting Venue and Identification Signs.

Social- Presidents Luncheon, Banquets, Awards Functions, Employers Recognition breakfast  
Technical Programs-Technical Talks, Panel Forums, Technical Tours, - Coordinating these events and speakers.

Transportation - Coordinate arrival of delegates and ensure adequate transportation is provided for all events.

Please respond via email to [john.d.stumpf@jci.com](mailto:john.d.stumpf@jci.com) for further details or to volunteer to make this the best CRC in decades.





# DECEMBER EMPLOYMENT LISTINGS



Position: Mechanical Engineer, HVAC/Plumbing Designer, Electrical Engineer  
Company: Cator, Ruma & Associates  
Website: [www.catorruma.com](http://www.catorruma.com)  
Main Phone: 303-232-6200  
FAX: 303-233-3701  
Address: 896 Tabor St.  
Lakewood, Co 80401  
Contact: send resumes to [cra-resumes@catorruma.com](mailto:cra-resumes@catorruma.com)

More Information:

## MECHANICAL ENGINEERS/DESIGNERS

Our office location is changing, but our commitment to quality engineering is not! Join our team as we move into our new building in Lakewood. Cator, Ruma & Associates has new/additional positions for MECHANICAL ENGINEERS AND DESIGNERS. Our MEP firm designs healthcare, educational and commercial facilities. We are also looking for AUTOCAD DESIGNERS AND ELECTRICAL ENGINEERS/DESIGNERS. We offer an excellent benefit package (salary, medical, 401K) and Friday afternoons off. Resumes to [cra-resumes@catorruma.com](mailto:cra-resumes@catorruma.com) or fax 303-233-3701. Visit [www.catorruma.com](http://www.catorruma.com).

=====  
Positions: Energy Engineer, Office Manager  
Company: PCD Engineering Services, Inc.  
Address: 184 Wetterhorn Way  
Longmont, CO 80501  
Phone: 303.678.1108  
Fax: 303.678.1142  
Web Site: [www.pcdengineering.com](http://www.pcdengineering.com)

Contact: Peter D'Antonio  
E-mail: [peter@pcdengineering.com](mailto:peter@pcdengineering.com)

### Energy Engineer

PCD Engineering Services is a recognized leader in creating energy-efficient and environmentally-sensitive buildings. We are seeking a self-sufficient, technically competent, motivated project manager for our energy consulting work in our Longmont, CO office. Someone that can take a project start to finish, has customer interface savvy, is a great writer, is experienced to complete energy modeling programs and energy calculations for buildings, and has a strong working knowledge of building energy systems. MEP design experience is also a plus.

PCD Engineering offers flexible hours, professional work environment and excellent benefits. We have found what we offer in contrast to the medium to large company culture is unsurpassed. Our environment is surely not for everyone. Our organization has a very flat structure as we function more as a team than as a hierarchy of management.

If you are interested, we'd love to hear from you. Please email resume and salary history to [jobs@pcdengineering.com](mailto:jobs@pcdengineering.com). Also, please visit us on the world wide web at [www.pcdengineering.com](http://www.pcdengineering.com).





# DECEMBER EMPLOYMENT LISTINGS



## Office Manager

PCD Engineering Services is a recognized leader in creating energy-efficient and environmentally-sensitive buildings. We are seeking an office manager to play an important role in our rapidly growing small firm in our Longmont, CO office.

The position is part time, with the high probability of full time employment in the very near future. PCD Engineering offers flexible hours, professional work environment and excellent benefits.

Duties will be varied and include marketing, promotional material development, website updates, public relations, general bookkeeping and client interface in addition to traditional receptionist responsibilities.

If you are motivated, computer savvy, independent, a great writer, and have strong communication and organizational skills, we'd love to hear from you. Please email resume and salary history to [jobs@pcdengineering.com](mailto:jobs@pcdengineering.com). Also, please visit us on the world wide web at [www.pcdengineering.com](http://www.pcdengineering.com).

=====

Position(s): Project Engineer  
Company: Aerotek  
Web Site: [www.aerotek.com](http://www.aerotek.com)  
Main Phone: 303-224-4500  
Fax: 303-753-4548  
Address: 2000 S. Colorado Blvd Suite 2-150  
Denver, CO 80222  
Contact: Jay Hill  
Contact Phone: 303-224-4467  
Contact Email: [jahill@aerotek.com](mailto:jahill@aerotek.com)

More Info: Aerotek is one of the leading providers of Engineering and Engineering Support Professionals in North America. We are constantly on the lookout for qualified professionals to place in contract, contract-to-hire, and permanent positions across a number of different industries.

Our client, a growing MEP Design and Consulting Engineering firm, is actively seeking a **Project Engineer / Project Manager**. Their services include the design of power, lighting, low voltage, HVAC, plumbing, and fire protection systems for renovations to existing facilities and new construction.

Ideal candidates will possess a Bachelors Degree in Electrical or Mechanical Engineering.

## About the Company:

Provide Design/Construction Services that include:

- Mechanical and Electrical Systems Design and General Construction Services
- Systems Commissioning
- Design of Low Tension Systems





# DECEMBER EMPLOYMENT LISTINGS



Provide Consulting Services that include:

- Mechanical and Electrical Systems Assessment and Master Planning
  - Project Management Services
  - Survey and Documentation of Existing Mechanical and Electrical Systems
  - Review and Develop Capital Budgets for Mechanical/Electrical Construction projects
  - On-site Systems Training for Maintenance Staff and Users

## Required Skills:

- College Degree in Electrical/Mechanical Engineering or Architectural Engineering
  - 3-5 or more years experience in the design of MEP systems for buildings
  - Licensed Professional Engineer in the State of Colorado PREFERRED;
  - Comprehensive experience in project management and ability to oversee 1-2 concurrent projects (developing project goals, schedules, budgets, multi-disciplinary teams)
  - Knowledge of AutoCad and proficiency with Microsoft Office

=====  
Position(s): Mechanical Engineer  
Company: Integrated Mechanical, LLC.  
Address: 223 Linden Street, Suite 204  
Fort Collins, CO 80524  
Contact: Human Resources  
Phone: 970.556.0570  
Contact Email: [resume@int-mech.com](mailto:resume@int-mech.com)

Integrated Mechanical, LLC, located in Fort Collins, Colorado, is actively seeking a Mechanical Engineer with HVAC/Plumbing design experience.

Qualified candidates shall have a BS Degree in Mechanical Engineering with a minimum 3 years of experience in HVAC/Plumbing design. Work history MUST include design of HVAC and plumbing systems for commercial buildings. Residential design experience may also be helpful. Working knowledge of AutoCAD is necessary. This position will include project management, engineering design, supervising system installation and assisting other engineers in job completion.

Integrated Mechanical is a privately owned design firm that strives for the highest quality service possible. We offer a family-oriented, stable working environment for our employees. Candidates who offer the above experience and are interested in long-term career opportunities should e-mail Microsoft Word or PDF formatted resumes, including salary history.

=====  
Position: Mechanical Plans Review Engineer  
Company: City and County of Denver  
Web Site: [www.denvergov.org](http://www.denvergov.org)  
Address: 201 W. Colfax Ave Dept 205, Denver, CO 80202





# DECEMBER EMPLOYMENT LISTINGS



Contact: Danny Boncich  
Contact Phone: (720) 865-2828  
Contact Email: danny.boncich@ci.denver.co.us

## More Info:

The City of Denver's Community Planning & Development Department is seeking a Mechanical Plans Review Engineer. Salary range \$75,204 - \$119,976/YR. Responsibilities include the review of building mechanical and plumbing construction documents for compliance to the Denver Building Code for new and existing buildings. Requires a BS in Mechanical Engineering; plus 3 years of professional mechanical construction engineering experience working as a lead project engineer. Driver's license and Professional Engineering License is required at time of application. International Code Conference Plans Examiner Certification is required by the end of the probationary period. Applicants must apply on-line at [www.denvergov.org/jobs](http://www.denvergov.org/jobs) EOE.

=====  
Position(s): Project Manager & Project Engineer  
Company: Engineering Economics, Inc.  
Web Site: [www.eeiengineers.com](http://www.eeiengineers.com)  
Main Phone: 303-239-8700  
Fax: 303-239-9982  
Address: 780 Simms St, Suite 210  
Golden, CO 80401  
Contact: Human Resources  
Contact Phone: 303-239-8700  
Contact Email: [HR@eeiengineers.com](mailto:HR@eeiengineers.com)

## More Info:

Our growing client list has created **Project Engineer and Project Management** opportunities. We are presently seeking proven mechanical engineers and leaders, dedicated to serving our clients and protecting their interests. We seek professionals capable of leading our projects to great achievements. If you have those qualities, we want you on our Team! Our unique culture encourages independence and an entrepreneurial spirit, while providing team support, great benefits and financial rewards!

Successful **Project Engineers and Project Managers** have the following:

- BSME (or equivalent)
- Proven project management skills.
- Demonstrated business acumen.
- Experience in mechanical (HVAC) system/controls design and construction.
- Experience in facility engineering, planning, peer review, and/or Cx services.
- PE or EIT (preferred)

EEI specializes in building commissioning, LEED® commissioning, facility assessment, planning, and M/E/P consulting services.

To learn more, go to [www.eeiengineers.com](http://www.eeiengineers.com)

**To apply send your resume to [HR@eeiengineers.com](mailto:HR@eeiengineers.com)**





# DECEMBER EMPLOYMENT LISTINGS



=====  
Position(s): Mechanical Engineers  
Company: E M C Engineers, Inc.  
Web Site: [www.emcengineers.com](http://www.emcengineers.com)  
Main Phone: 303-974-1200  
Fax: 303-974-1239  
Address: 143 Union Blvd., Suite 350  
Lakewood, CO 80228  
Contact: Tom Poeling  
Contact Phone: 303-974-1200  
Contact Email: [tpoeling@emcengineers.com](mailto:tpoeling@emcengineers.com)

## Background:

EMC Engineers has 31 years experience in making buildings work better. Substantial and sustained growth in all of our core technical service areas has resulted in multiple opportunities for professional positions in energy engineering, high performance MEP design, commissioning new construction and retro-commissioning existing buildings. Our clients achieve significant reductions in operating costs and carbon footprint while increasing their productivity and performance.

EMC is a leader in delivering high performance building solutions. We have strong credentials in mechanical, electrical, and control systems for new construction and retrofit/modernization, energy engineering and commissioning. We are a national firm with 6 offices, appropriately diversified, and provide outstanding professional opportunities, un-matched benefits, and an opportunity to apply your engineering talent to really “make a difference.” Positions are open in Denver, Salt Lake City and Irvine for:

**Junior Mechanical Engineers:** B.S. in Mechanical or Architectural Engineering plus 0 to 3 years of work experience. Successful candidates require background design (or analysis) of mechanical building systems (HVAC, plumbing, temperature controls). Candidate must be willing to accept a wide variety of engineering tasks, including site investigations, design, energy modeling, and system testing.

**Staff Mechanical Engineers:** B.S. in Mechanical or Architectural Engineering or comparable management or technical experience for non-degreed applicants. Successful candidates for Cx and Retro-Cx positions require background in commissioning and/or equipment testing and troubleshooting, including energy engineering and energy conservation for mechanical building systems (HVAC, plumbing, temperature controls). Successful candidates for design positions require demonstrated capability in design of HVAC, plumbing and controls systems. Design positions include energy efficiency analysis. Familiarity with USBGC LEED program and experience for high performance building projects is a plus.

=====  
Positions: Mechanical & Electrical Engineers  
Company: Caveo, Inc. dba Caveo Consulting Engineers  
Website: [www.caveoeng.com](http://www.caveoeng.com)  
Main Phone: (720) 200-5955  
Fax: (720) 200-5530  
Address: 6143 S. Willow Drive, Suite 405  
Englewood, CO 80215







# DECEMBER EMPLOYMENT LISTINGS



Contact: Susan Rookstool  
Contact Phone: (720) 200-5955  
Contact Email: [srookstool@caveoeng.com](mailto:srookstool@caveoeng.com)

## More Information:

Caveo Consulting Engineers, a growing MEP firm providing consulting engineering services exclusively for healthcare, has immediate openings for mid and upper level mechanical and electrical engineers who desire to make a living while making a contribution to the growing healthcare community. Caveo offers an excellent benefit package that includes medical and 401(k) plan as well as Friday afternoons off, a flexible and friendly work environment, and the opportunity to make a difference in a growing company. Please send resumes and requests for additional information to [srookstool@caveoeng.com](mailto:srookstool@caveoeng.com) and visit [www.caveoeng.com](http://www.caveoeng.com).

=====

Position(s): HVAC Project Engineer or Systems Designer  
Company: Innovative Mechanical Systems, Inc.  
Web Site: [www.innovativemechanicalsystems.com](http://www.innovativemechanicalsystems.com)  
Main Phone: 720-890-1080  
Fax: 720-890-1780  
Address: 1500 Cherry Street, Suite A, Louisville, CO 80027

Contact: Bonnie Baas  
Contact Phone: 720-890-1080  
Contact Email: [bonnie@innmechsys.com](mailto:bonnie@innmechsys.com)

## More Info:

Innovative Mechanical Systems, Inc., a Mechanical Design/Build Contractor with in-house engineering department seeks HVAC Project Engineer or Systems Designer. Applicants must be proficient in HVAC systems design including load calculations, equipment selection, hydronic system sizing, mechanical systems layout and drawing coordination. Knowledge of AutoCAD, local codes and a minimum of 5 years experience required; knowledge of Autodesk Building Systems a plus. Excellent salary and benefit package including employer matching 401(k). Send resume to Attn: Engineering, Innovative Mechanical Systems, Inc., 1500 Cherry Street, Suite A, Louisville, CO 80027 or e-mail to [bonnie@innmechsys.com](mailto:bonnie@innmechsys.com)

=====

Position(s): Mechanical Engineer, Mechanical Designer, Electrical Engineer  
Company: JBA Consulting Engineers  
Web site: [www.jbace.com](http://www.jbace.com)  
Phone: 303-907-4285  
Address: 13952 Denver West Parkway, Suite 250, Lakewood, CO 80401  
Contact: Bryan Moen, P.E.  
Email resume in confidence to [bmoen@jbace.com](mailto:bmoen@jbace.com) for Denver area job openings or [jobs@jbace.com](mailto:jobs@jbace.com) for openings in Las Vegas and Costa Mesa, CA





# DECEMBER EMPLOYMENT LISTINGS



JBA Consulting Engineers is a multi-discipline national engineering firm specializing in the design and implementation of HVAC, plumbing, electrical, telecommunications, acoustics, audio/visual, life safety, and energy conservation design. JBA Consulting Engineers was founded in 1966 and has provided professional consulting and engineering services for hotels, casinos, educational facilities, judicial facilities, hospitals, major airport expansions, office buildings, retail, and multi-use facilities. JBA Currently has positions available in Denver, Las Vegas, and Costa Mesa, CA and is seeking qualified employees to staff and share in an exciting opportunity to work with a progressive global-minded firm with tremendous growth potential. JBA offers excellent benefits with bonus opportunities available. Salary DOE.

## Mechanical Engineer

Provide design and supervision of design of others for plumbing and HVAC systems. Bachelors Degree in Architectural or Mechanical Engineering from an accredited university or equivalent experience. Proven ability to perform the duties specified with prior project experience at an equivalent level of responsibility. Minimum 3 years experience. PE in Colorado or EIT with ability to obtain PE preferred.

## Mechanical Designer

Provide design for plumbing and HVAC systems. Proven ability to perform the duties specified with prior project experience at an equivalent level of responsibility. Minimum 3 years experience.

## Electrical Engineer

Provide design and supervision of design by others for power and lighting systems. Bachelors Degree in Architectural or Electrical Engineering from an accredited university or equivalent experience. Proven ability to perform the duties specified with prior project experience at an equivalent level of responsibility. Minimum 5 years experience. PE in Colorado or ability to obtain is preferred.

## Electrical Designer

Provide design for power and lighting systems. Proven ability to perform the duties specified with prior project experience at an equivalent level of responsibility. Minimum 3 years experience.

=====  
Position(s): Facilities Energy Management Engineer  
Company: City of Aurora  
Web Site: [www.auroragov.org](http://www.auroragov.org)  
Phone: 303-326-8163 or 303-326-8150  
Address: 13636 E. Ellsworth Avenue, Aurora, CO 80012  
Contact: Howard Kaplan, P.E.

## **Facilities Energy Management Engineer**

The City of Aurora is recruiting for an exciting newly established position. This individual will perform energy management and facilities repair/ construction program development for projects for over 120 City buildings. Conducts building energy audits. Helps develop electric and natural gas budgets for the City. Assignments provide for the application of independent judgment and initiative in the design and construction of projects to improve energy efficiency and environmental comfort in a full range of disciplines, including mechanical, electrical and structural improvements/ renovations. Oversees the application of LEED





# DECEMBER EMPLOYMENT LISTINGS



standards for new construction and renovation of existing buildings. Oversees the City's Energy Awareness Program. Qualifications: Bachelor's Degree in engineering or related field. EIT with 5 years of experience. LEED Accredited Professional Certification or ability to obtain certification within 6 months of employment. AutoCad a plus.

=====

Position(s): various  
Company: Murphy Company  
Web Site: [www.murphynet.com](http://www.murphynet.com)  
Main Phone: 303-371-6600  
Fax: 303-371-6616  
Address: 3790 Wheeling Street, Denver CO 80239

Contact: Human Resources  
Contact Email: [denverjobs@murphy-den.com](mailto:denverjobs@murphy-den.com)

## Company Info:

Founded in 1907, Murphy Company performs construction and engineering work in the industrial, commercial, municipal and institutional construction and service markets. Murphy Company is licensed in 32 states and has performed work in 25 states. Murphy has set the standard for mechanical and industrial construction and engineering earning the distinction of being ranked 10th largest mechanical specialty contracting firm in the 2006 ENR/Engineering News-Record.

This is an opportunity to join a dynamic, growth-oriented company that offers a highly competitive compensation and excellent benefits package, along with opportunities for personal and professional development. For immediate consideration, please forward your resume and salary expectations via fax 303-371-6616 or email to [denverjobs@murphy-den.com](mailto:denverjobs@murphy-den.com). EOE

## **Energy Engineer**

Perform detailed building audits of MEP systems. Technical expert at identifying and quantifying energy and water conservation measures. Develop costs to implement measures, calculate energy baselines, estimate utility and maintenance savings. Will complete life cycle cost analysis, prepare and present proposals, assist project managers in implementation of recommendations. Engineering degree with 5-7 years experience in the energy management field related to electrical or HVAC systems, CEM certificate required. Controls system and lighting retrofit experience preferred.

## **Design Build Engineer**

Design-Build Engineer with experience at HVAC & Plumbing construction document production including calculations, layout, coordinate with other disciplines to include CAD drafting, survey of existing conditions and completion of construction drawings. The candidate should be interested in improving their understanding of the construction cost, constructability, and schedule implications of different design choices. Bachelors of Science Engineering Degree and Colorado PE License required. Minimum of 10 years design experience and prior construction experience a plus.

## **Service Dispatcher**

Individual takes, dispatches and follows-up on service calls; provide purchase orders and job numbers for techs; assemble job costs for billing to include payroll, accounts payable, purchase orders, warehouse charges etc. for billing; set-up jobs in Accounting system; order uniforms and maintain effective professional communication with clients. Must be flexible, detail-oriented, able to multi-task and maintain confidentiality; demonstrate a working knowledge of Microsoft office software; previous dispatch experience is a must; previous construction experience preferred.





# DECEMBER EMPLOYMENT LISTINGS



## **Quick Response Project Manager**

Candidate sought to manage overall job progress; conduct safety audits, evaluate hazard potentials on project, organize safety orientations, and distribute safety information; plus develop and maintain client relationships. College degree preferred, along with ability to use MS Office and QuickPen Estimating System. Understanding of sheet metal, HVAC, piping, plumbing and refrigeration systems required. Understanding and ability to perform conceptual design and layout of HVAC and plumbing systems also required

## **Senior Project Manager**

Candidate must demonstrate leadership in the area of safety performance, have achieved a level of experience above and beyond that of a typical Project Manager, must be proficient in the understanding, accuracy, and timely completion of job cost forecasting, can be assigned responsibilities regardless of size and/or type of project, has the ability to develop and cultivate close client relationships, displays a high level of professionalism and actively participates in industry organizations.

## **Quick Response Group Manager**

The Quick Response Group Manager must demonstrate leadership in safety performance and quality. Responsible for the projects and Project Managers in the QR group, including group financial responsibility. Must be proficient in the understanding, accuracy, and timely completion of job cost and group forecasting, have the ability to develop and cultivate close client relationships, displays a high level of professionalism, and actively participate in industry organizations. Bachelors of Science in Construction Management/Mechanical degree preferred.

## **Service Sales Representative**

Individual is responsible for the new project management contract sales, account management, sales within accounts assigned. Candidate must be dependable and responsible individual who can take direction and work with little supervision; personable, poised, mature and well spoken. Must have excellent verbal and written communication skills; flexible, detail-oriented, able to multi-task, and maintain confidentiality. Individual should demonstrate a working knowledge of Microsoft office software and be customer focused and sales driven with 5-years sales experience.

=====

Position(s): Mechanical Engineer, P.E. / Electrical Engineer, P.E.  
Company: ShafferBaucom Engineering & Consulting  
Web Site: sbengr.com  
Main Phone: 303.986.8200  
Fax: 303.986.8222  
Address: 7333 W. Jefferson Ave., Suite 230 Lakewood, CO 80235

Contact: Ellie Dugle  
Contact Phone: 303.986.8200

### **More Info:**

ShafferBaucom Engineering & Consulting is looking for a 5-8 year Mechanical Engineer, P.E. and a 5-8 year Electrical Engineer, P.E. to join our team. We provide an excellent and competitive benefit package including bonuses. Our firm works a 4.5 day work week with Friday afternoons off. We encourage you to visit our website [www.sbengr.com](http://www.sbengr.com). We provide both mechanical and electrical engineering services all over the Front Range area and the western slope. We take great pride in our team. We have great clients and interesting projects. Our firm promotes career growth and values everyone's contributions. Email your resume to [edugle@sbengr.com](mailto:edugle@sbengr.com).





Name: \_\_\_\_\_  
 (Last) (First) (MI)

Status: Renewal \_\_\_\_\_ New Member \_\_\_\_\_ Address Change \_\_\_\_\_

Please circle preferred mailing address:  
 Home Address and Phone

Business Name, Address and Phone

\_\_\_\_\_  
 \_\_\_\_\_  
 p: \_\_\_\_\_

\_\_\_\_\_  
 \_\_\_\_\_  
 p: \_\_\_\_\_

Preferred email address: \_\_\_\_\_

Society Membership Number / Grade: \_\_\_\_\_

Name Tag (\$10.00) Paid? Y N

Name to appear on name tag as: \_\_\_\_\_

I would like to be contacted about serving on one of the following committees or functions (Please circle):

- |                       |                                      |
|-----------------------|--------------------------------------|
| A. Newsletter         | H. Research Fund Promotions          |
| B. Membership         | I. Monthly Meeting Programs          |
| C. Meeting Attendance | J. Publicity                         |
| D. Education          | K. Spouse's Night / Social Committee |
| E. Golf               | L. Colorado Engineering Council      |
| F. Chapter Historian  | M. General (Committee Help)          |
| G. Technical Seminars | N. Energy Committee                  |

Please mail this invoice and your check for \$50.00 (2007 / 2008 year) + \$10.00 payable to **Rocky Mountain Chapter ASHRAE** to the address listed below. ASHRAE will invoice you for both society and local dues every year following the first year.

Ms. Michelle Swanson, PE  
 Rocky Mountain Chapter ASHRAE Membership Promotion Chair  
 10055 W 43<sup>rd</sup> Ave, Wheat Ridge, CO 80033  
[michelle.swanson@me-engineers.com](mailto:michelle.swanson@me-engineers.com)





# ASHRAE RESEARCH



*Don't Wait, Please Donate For The 2007-2008 Calendar Year*

Mail Check To:

**ASHRAE RESEARCH**

c/o Big Ass Fans  
10699 Riverbrook Circle  
Littleton, CO 80126

**Your contribution puts us closer to achieving**

our goal. Please send what you can today!

\*Individual contributions of \$100 or more and  
Corporate contributions of \$150 or more  
receive this year's Commemorative Coin  
and Honor Roll Contribution status.

Name: \_\_\_\_\_

Company: \_\_\_\_\_

Address: \_\_\_\_\_

TEL: \_\_\_\_\_

|            |         |          |          |          |
|------------|---------|----------|----------|----------|
| INDIVIDUAL | \$25.00 | \$50.00  | \$75.00  | \$100.00 |
| CORPORATE  | \$75.00 | \$100.00 | \$175.00 | \$250.00 |

Other: \_\_\_\_\_

Other: \_\_\_\_\_

Or contact Scott Martin @ 303.239.0909



## ROCKY MOUNTAIN CHAPTER



# ASHRAE RESEARCH DONOR LEVELS AND RECOGNITION

|                                                          |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                       |                                                                                       |                                                                                       |
|----------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| Presented Golden Circle Commemorative Sculpture          |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                       |                                                                                       |    |
| Individually recognized at President's Luncheon*         |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                       |                                                                                       |    |
| Invited to President's Luncheon*                         |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                       |                                                                                       |    |
| Invited to Board of Directors Luncheon*                  |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                       |                                                                                       |    |
| Listed on special Display at President's Luncheon*       |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                       |                                                                                       |    |
| Group photo published in spring issue of ASHRAE Insights |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                       |                                                                                       |    |
| Receives personalized shadowbox plaque                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                       |    | -----                                                                                 |
| Listed on RP Display in Registration                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |   |   |   |
| Receives Gold ASHRAE Commemorative Coin & Plaque         |                                                                                     |                                                                                     |                                                                                     |                                                                                     |  |  |  |
| Receives Silver ASHRAE Commemorative Coin & Plaque       |                                                                                     |                                                                                     |                                                                                     |  | -----                                                                                 | -----                                                                                 | -----                                                                                 |
| Receives Bronze ASHRAE Commemorative Coin & Plaque       |                                                                                     |                                                                                     |  | -----                                                                               | -----                                                                                 | -----                                                                                 | -----                                                                                 |
| Receives Antique ASHRAE Commemorative Coin & Plaque      |                                                                                     |  | -----                                                                               | -----                                                                               | -----                                                                                 | -----                                                                                 | -----                                                                                 |
| Receives blue desktop coin holder                        |  | -----                                                                               | -----                                                                               | -----                                                                               | -----                                                                                 | -----                                                                                 | -----                                                                                 |
| Listed in annual Investor Honor Roll                     |  |  |  |  |  |  |  |
|                                                          | Honor Roll Donor<br>\$150-\$249                                                     | Major Donor – Antique<br>\$250-\$499                                                | Major Donor – Bronze<br>\$500-\$999                                                 | Major Donor – Silver<br>\$1000-\$2499                                               | ASHRAE Associate<br>\$2500-\$4999                                                     | ASHRAE Partner<br>\$5000-\$9999                                                       | Golden Circle Donor<br>\$10,000 +                                                     |

\* ASHRAE Winter Meeting





## FIRST CLASS

Chapter may not act for Society. Expressions,  
opinions, and comments within this newsletter should  
not be taken as those of the Chapter or Society.

Rocky Mountain Chapter of ASHRAE  
CFM Company  
c/o Adam Bishop  
1440 South Lipan St.  
Denver, CO 80223-3411



## ACTIVITIES CALENDAR



For membership info or change of address contact: Michelle Swanson • [michelle.swanson@me-engineers.com](mailto:michelle.swanson@me-engineers.com)

### ASHRAE Events

August 13-18, 2008 Convention of Regional Chairs Denver

Visit the new Rocky Mountain ASHRAE website

[www.rockymtnashrae.com](http://www.rockymtnashrae.com)