

## Rocky Mountain ASHRAE



VOLUME 52, NUMBER 8

APRIL 2011

EDITOR: MIKE HARRINGTON

## April MEETING

### Denver Meeting

**Date:** Wednesday, April 6, 2011

**Time:** 11:30 Registration/Lunch  
12:00 Program Begins

**Location:** Dave & Buster's  
2000 S. Colorado Blvd  
Denver, CO 80222

**RSVP:** Jon Rundquist  
[jonathan.e.rundquist@jci.com](mailto:jonathan.e.rundquist@jci.com)

**Cost:** \$25 Rocky Mtn Chapter Members  
\*Reservation must be made by 12:00 pm  
April 4, 2011  
\$30 Non-members and late reservations  
\$20 Students

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### ASHRAE 2011 MEETING SCHEDULE

APRIL 6, 2011

TECH CONF: APR 15, 2011

MAY 4, 2011

TENTATIVE MEETING: JUNE 8,  
2011

GOLF: JUNE 20, 2011

REGION IX CRC IN EL PASO:  
AUGUST 10-13, 2011

### "Panel Discussion on Energy Modeling"

This month's ASHRAE meeting is a panel discussion on energy modeling on information on why to do an energy model, how to select an energy modeler, and using modeling to support the integrated design process. Please send any questions prior to the meeting for the panel to Michelle Swanson [mswanson@rmhgroup.com](mailto:mswanson@rmhgroup.com). The discussion panel consists of:

#### -Aleka Pappas, EIT, BEMP, LEED AP

Aleka is a building energy engineer and project manager for Group14 Engineering in Denver, with over 10 years experience working in the architectural and engineering fields. She is an expert in building energy simulation softwares such as DOE-2/eQuest, EnergyPlus, Ecotect, daylight modeling, and computational fluid dynamics (CFD). Aleka works with design teams to integrate energy and resource efficiency into commercial buildings ranging from offices to academic laboratories.

#### -Jessie Jones, EIT, LEED AP O+M

Jessie is the Director of Sustainable Services for The RMH Group. She has served as a mechanical engineer, the LEED® for Existing Buildings and LEED® for Commercial Interiors coordinator with the firm's sustainable design team for the past five years, assisting clients to achieve their goals through consulting on energy modeling and evaluating renewable energy options. Jessie was a founding member and initial chair of the Rocky Mountain ASHRAE Chapter's Sustainable Engineering Committee and is on the chapter's Board of Governors as Treasurer. Jessie earned a B.S. in architectural engineering from the University of Wyoming, she is a LEED® Accredited Professional in LEED®-NC, LEED® BD+C, LEED®-EB, LEED O+M, and LEED®-CI rating systems.

#### -Ellen Franconi, PhD, LEED AP, BEMP

Ellen is a senior consultant within RMI's built environment practice. She has worked in the building energy field and performed simulation analysis for nearly 25 years to support research, utility DSM programs, M&V and integrated design assistance. Her work is application focused - giving her first-hand experience of the challenges modelers face in today's market. She has served a 5-year term on the USGBC Energy & Atmosphere Technical Advisory Group, is the vice-chair of the IPMVP committee and is an IBPSA board member.

# PRESIDENT'S MESSAGE

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Dear Rocky Mountain ASHRAE:

It is that time of year again where we vote on a new Rocky Mountain ASHRAE Board of Governor's member. Remember that this candidate isn't just taking on the junior position of Newsletter Editor but that they are being sent on a path that will ultimately lead to being President of our Chapter. This is a seven year commitment when including the Past President role on the BOG. I believe that the BOG's recommended candidate is ready to give a lot of time and effort over these seven years to provide us with an every improving Chapter. This year's BOG candidate is Megan Van Wieren with EMC Engineers, Inc. You can read more about Megan and her ASHRAE efforts to date in the candidate bio included elsewhere in the newsletter.

I would like to thank our Vice President and Chapter Technology Transfer Chair, Michelle Swanson, for all her hard work this year. Getting quality speakers to come to our member meetings is one of the hardest tasks completed by the BOG. I think Michelle is doing a great job getting unique speakers that are not normally present here in the Rocky Mountain Region. Thank you Michelle and we look forward to the final two meetings of the year.

Submissions for the ASHRAE Technology Awards are due April 1st. 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. There are numerous Chapter, Regional and Society awards so please take the time to create a submission to recognize these great projects we design and build right here in the Rocky Mountain Region.

Remember to mark your calendars as the Chapter Technical Conference is right around the corner. This year's Technical Conference will be held at the Sheraton in Denver West is on Friday April 15th. We have a great bunch of speakers lined up and a special key note as well. As always we pride ourselves in providing a great educational experience at a low dollar cost to our members. What proceeds we do make go directly to ASHRAE Research Promotion.

As always if you have questions or concerns please feel free to email, phone, or just grab me during one of our monthly meetings.

Sincerely,



Ken Urbanek, PE, ASHRAE HBDP, LEED AP

Chapter President, Rocky Mountain Chapter of ASHRAE

# ASHRAE RESEARCH

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*Don't Wait, Please Donate for the 2010-2011 Calendar Year*

Mail Check To:  
**ASHRAE RESEARCH**  
c/o Adam Bishop, CFM Company  
1440 S Lipan St  
Denver, CO 80223

**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 will  
receive this year's Commemorative Coin  
and Honor Roll Contribution status.

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

Company: \_\_\_\_\_

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

Telephone: \_\_\_\_\_

INDIVIDUAL	\$25.00	\$50.00	\$75.00	\$100.00
CORPORATE	\$75.00	\$100.00	\$175.00	\$250.00

Other: \_\_\_\_\_

Other: \_\_\_\_\_

*Or Contact Adam Bishop at: 303.607.4438*



## ***ROCKY MOUNTAIN CHAPTER***

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# CHAPTER TECHNOLOGY TRANSFER COMMITTEE

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If you have any suggestions for meeting topics for the 2010/2011 ASHRAE year, please send your ideas to Michelle Swanson at [mswanson@rmhgroup.com](mailto:mswanson@rmhgroup.com).

## Chapter Technology Awards

We are currently seeking entries for our Chapter Technology Award. All current members of ASHRAE may apply. Technology Award applications are accepted in the categories of commercial buildings, institutional buildings, health care, industrial & public facilities, residential buildings, and renewable energy use. Please submit these projects so you can receive your proper recognition.

On the next page you will find a copy of the short form. This is all you need to fill out for both the chapter and regional levels.

Contact Michelle Swanson at [mswanson@rmhgroup.com](mailto:mswanson@rmhgroup.com) with entries.



ASHRAE

## CHAPTER/REGIONAL TECHNOLOGY AWARD APPLICATION

### SHORT FORM

(7/29/08)

#### **INTRODUCTION:**

*This Short Form has been developed to stimulate more participation in chapter and regional competition. **This form is not intended to replace the full Society Technology Award Application form.** Regional winners using the short form will be required to complete the full Technology Award Application form before their applications can be forwarded for Society Competition. (This form does not require extensive narrative, plans or photographs.)*

#### **INSTRUCTIONS:**

- A. The individual submitting the Technology Award Application must be a current member of ASHRAE who had a significant role in the design or development of the project.
- B. Complete the "Short Form" and use it as the cover page.
- C. Provide a system schematic/diagram not larger than 11" x 17" in size. In addition, attach a brief narrative (maximum of 2 pages). The narrative should include the gross and net building areas applicable to the project, a description of the major building areas (i.e., operating rooms, laboratories, computer rooms, industrial processes, offices, warehouses) and a brief discussion regarding the following five criteria ( if a criterion is not applicable, state accordingly):
  - Energy Efficiency
  - Indoor Air Quality
  - Innovation
  - Operation & Maintenance
  - Cost Effectiveness
  - Environmental Impact
- D. Submit your schematic, brief narrative, and completed form to your Chapter Technology Committee Chapter (CTTC) Chair for judging at the chapter level in accordance with their instructions.
- E. Winners in each category from the chapter competition will be submitted by the CTTC Chapter Chair to the Regional CTTC RVC Chair. Submit the appropriate number of copies as requested by your Regional RVC.
- F. It is highly recommended that each entrant confirm by letter (and retain a copy for record) to the owner that the owner has granted permission to submit this project to competition.

NOTE: ASHRAE Technology Awards are the HVAC&R industry's most prestigious honor for efficient energy use in buildings and environmental system performance. While the awards do not certify responsible charge or professional license status, they do recognize outstanding design innovation and successful implementation.

# CHAPTER/REGIONAL TECHNOLOGY AWARD - SHORT FORM

**1. Category (Check one and indicate New or Existing, if applicable)**

- |  |   |
|--|---|
| <input type="checkbox"/> Commercial Buildings                    | <input type="checkbox"/> New or <input type="checkbox"/> Existing |
| <input type="checkbox"/> Institutional Buildings                 | <input type="checkbox"/> New or <input type="checkbox"/> Existing |
| <input type="checkbox"/> Health Care Facilities                  | <input type="checkbox"/> New or <input type="checkbox"/> Existing |
| <input type="checkbox"/> Industrial Facilities or Processes      | <input type="checkbox"/> New or <input type="checkbox"/> Existing |
| <input type="checkbox"/> Public Assembly                         |   |
| <input type="checkbox"/> Residential                             |   |
| <input type="checkbox"/> Alternative and/or Renewable Energy Use |   |

**2. Name of Building or Project:**

City/State:

**3. Project Description:**

**Project Study/Design Period:**

**Has the project been completed? Yes                      No**

**If YES, date completed:**

**If NO, scheduled date of completion (or other explanation):**

**4. Entrant (ASHRAE member with significant role in project) If multiple entrants, all must be listed.**

**a. Name:**

*Last*

*First*

*Middle*

Membership Number:

Chapter

Region:

**b. Address (including country):**

*City*

*State/Province*

*Zip/Country Code*

**c. Telephone: Office**

**d. E-mail address:**

**e. Company:**

**f. Member's Role in Project:**

**g. Member's Signature:**

**5. Engineer of Record:**

By affixing my signature above, I certify that the information contained in this application is accurate to the best of my knowledge. In addition, I certify that I have discussed this entry with the owner and have received permission from the owner to submit this project to the ASHRAE Technology Awards Competition.

# ROCKY MOUNTAIN ROSTER

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## Rocky Mountain ASHRAE 2010 - 2011 Board of Governors

Title/Committee Chair	Name	Email	Phone
President	Ken Urbanek	<a href="mailto:kurbanek@mkkeng.com">kurbanek@mkkeng.com</a>	303.796.6000
President-elect/Tech Conf.	Adam Bishop	<a href="mailto:adamb@cfmcompany.com">adamb@cfmcompany.com</a>	303.607.4438
Vice President/CTTC Chair	Michelle Swanson	<a href="mailto:mswanson@rmhgroup.com">mswanson@rmhgroup.com</a>	303.239.0909
Secretary	Jon Rundquist	<a href="mailto:jonathan.e.rundquist@jci.com">jonathan.e.rundquist@jci.com</a>	303.904.7923
Treasurer	Jessie Jones	<a href="mailto:jjones@rmhgroup.com">jjones@rmhgroup.com</a>	303.239.0909
Newsletter Editor	Mike Harrington	<a href="mailto:mharrington@setpointsystems.com">mharrington@setpointsystems.com</a>	303.733.2300
Past President	Justin Dunkin	<a href="mailto:justind@cfmcompany.com">justind@cfmcompany.com</a>	970.493.7293
Director	Kevin Parrot	<a href="mailto:kevinp@trinity-mechanical.com">kevinp@trinity-mechanical.com</a>	303.442.3175
Director	John Stumpf	<a href="mailto:jstumpf@CarrierWest.com">jstumpf@CarrierWest.com</a>	720.472.0422
Northern Section Chair	Mike Fulton	<a href="mailto:mfulton@westernmechanicalsolutions.com">mfulton@westernmechanicalsolutions.com</a>	720.934.8273
Membership	Chris Garofoli	<a href="mailto:CGarofoli@victaulic.com">CGarofoli@victaulic.com</a>	303.396.9006
Historian	Dale Eismueller	<a href="mailto:dale@werc.com">dale@werc.com</a>	303.406.4080
Website	Shane Newman	<a href="mailto:shanenewman@gmail.com">shanenewman@gmail.com</a>	303.421.6655
Student Activities	Craig Wanklyn	<a href="mailto:craig.wanklyn@me-engineers.com">craig.wanklyn@me-engineers.com</a>	303.421.6655
Sustainable Engineering	Megan Van Wieren	<a href="mailto:MeganLVanWieren@Eaton.com">MeganLVanWieren@Eaton.com</a>	303.974.1230
Government Activities	Celeste Cizik	<a href="mailto:CelesteLCizik@eaton.com">CelesteLCizik@eaton.com</a>	303.974.1212

# SUSTAINABLE ENGINEERING COMMITTEE

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If you would like to be a part of the meeting or have questions about the committee, please contact Megan Van Wieren at [sustainable@rockymtnashrae.com](mailto:sustainable@rockymtnashrae.com).

The SEC committee is currently focusing on the following items and/or issues:

- Developing a sustainable project for a deserving non-profit organization in Denver to be presented at the ASHRAE 2013 Summer Conference
- Planning for green building tours
- Collaboration between ASHRAE , AIA, USGBC, and the Governor's Energy Office
- To be added to the Rocky Mountain ASHRAE SEC mailing list please contact Megan at: [MeganLVanWieren@Eaton.com](mailto:MeganLVanWieren@Eaton.com)

## 2013 ANNUAL MEETING SUSTAINABILITY PROJECT

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In preparation for the 2013 Annual ASHRAE Society Meeting, the Rocky Mountain chapter is looking for possible projects that the chapter can sponsor in an effort to reduce the environmental impact of the meeting.

Each year, ASHRAE selects a Sustainability Project for members to volunteer their time and services. This project traditionally is done for a non-profit organization that would significantly benefit from energy efficiency upgrades and improved systems. A recent project organized by the Utah chapter involved adding a solar hot water heating system to an existing YWCA.

If you or your organization knows of a project which may be a candidate for our 2013 Annual Meeting Sustainability Project, please contact Brian Lynch at 720.472.1037 or [BL@westernmechanicalsolutions.com](mailto:BL@westernmechanicalsolutions.com).

# GREENING OUR MEETINGS

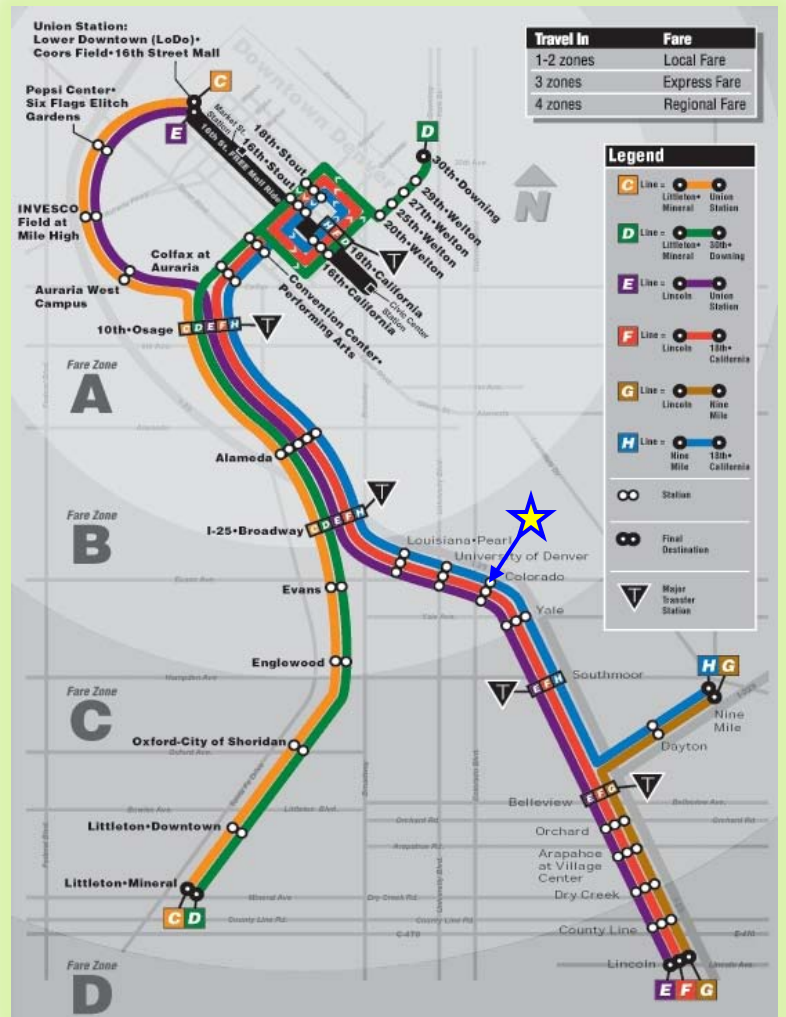
The Rocky Mountain Chapter of ASHRAE will present a free raffle ticket to anyone taking public transportation to the monthly ASHRAE meeting.

One raffle ticket will be given to each participant for each meeting. Visit [www.rtd-denver.com](http://www.rtd-denver.com) for system maps and times or contact [ridegreen@rockymtnashrae.com](mailto:ridegreen@rockymtnashrae.com) for further assistance.

Acceptable modes of alternative transportation:

- ✓ Walking
- ✓ Bicycling
- ✓ Bus
- ✓ Light Rail
- ✓ Alternative Fuel Vehicle
- ✓ High Efficiency Vehicle (35+ mpg)
- ✓ Carpooling (2 or more persons)

The ASHRAE meeting (Denver) at Dave & Buster's is located at the **Colorado Light Rail Station** for lines **E, F** and **H**. Any bus lines that pass through the **Evans and Colorado** intersection will also get you to Dave & Buster's.



# MEMBERSHIP PROMOTION

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Welcome to the “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 in the roster.
2. Only the city and state of your primary contact address are included.
3. If no email address appears where your email address should be, ASHRAE does not have an email address for you.
4. Your name appears in the same format as recorded by ASHRAE. If ASHRAE doesn't have your titles or post-nominal letters (e.g., Dr., P.E., Ph.D., etc.), they are not included.
5. Your current member grade is also shown. If you are listed as an Affiliate Member or Associate Member grade and are interested in advancing to Associate Member or Member grade, please update your bio on the [www.ashrae.org](http://www.ashrae.org) website. Then send an email to [membership@ashrae.org](mailto:membership@ashrae.org) requesting the member grade advancement. I have recently completed this for myself, so I can talk you through it.
6. If any of your information is incorrect or if you want changes made to your information, please login at [www.ashrae.org](http://www.ashrae.org) and update your bio by following the link to Manage Membership under the Membership tab. Once you reach the membership page, click on Address Change to take you to your bio.
7. If you have been omitted from this list and want to know why, please let me know and I can investigate. Common reasons for omission include human errors and unpaid ASHRAE membership dues; most typically are easily corrected.

If you have questions or need membership assistance please send an email to [cgarofoli@victaulic.com](mailto:cgarofoli@victaulic.com) or call Chris Garofoli at 303-396-9006.

Also, please look around your company and through your contacts to let people know about the benefits of joining ASHRAE. We continue to bring in new young members of the industry to keep them involved with technology and standard advancements.

# ROCKY MOUNTAIN MEMBERSHIP APPLICATION



Name: \_\_\_\_\_ (Last) \_\_\_\_\_ (First) \_\_\_\_\_ (MI)

Status: Renewal \_\_\_\_ New Member \_\_\_\_ Address Change \_\_\_\_

Please circle preferred mailing address: HOME BUSINESS

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         | F. Chapter Historian        | K. Spouse's Night / Social Committee             |
| B. Membership         | G. Technical Seminars       | L. Colorado Engineering Council (Committee Help) |
| C. Meeting Attendance | H. Research Fund Promotions | M. General                                       |
| D. Education          | I. Monthly Meeting Programs | N. Energy Committee                              |
| E. Golf               | J. Publicity                | O. Sustainable Engineering Committee             |

Please mail this invoice and your check for \$50.00 (2010 / 2011 year) + \$10.00 (Name Tag if requested) 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.

Chris Garofoli  
Rocky Mountain Chapter ASHRAE Membership Promotion Chair  
c/o Victaulic  
3416 Alcott Street Denver, CO 80211  
[cgarofoli@victaulic.com](mailto:cgarofoli@victaulic.com)

# HISTORY

## Past Presidents:

### Rocky Mountain Chapter:

#### ASHVE/ASHAE, Organized 1944:

1944	J.H. McCabe	1971-1972	V.A. Olson
1945	C.D. Maves	1972-1973	J.C. Sproul
1946	F.L. Adams	1973-1974	D.P. Rosier
1947	J.F. Mohan	1974-1975	D.R. Roberts
1948	F. Janssen	1975-1976	W.R. Kimball
1949	E.J. McEahern	1976-1977	R.J. Martilla
1950	R.W. Peterson	1977-1978	M.C. Scofield
1951	B.H. Spurlock, Jr.	1978-1979	R.D. Adair, Jr.
1952	N.G. Brickman	1979-1980	R.E. Bott
1953	H.L. Wray	1980-1981	R.E. Sidwell
1954	V.F. Vellero	1981-1982	W.J. Higgins
1955	L.L. DeLong	1982-1983	T.D. Colvin
1956	A.S. Widdowfield	1983-1984	A. Occhionero
1957	D.D. Pearsall	1984-1985	Jock Griffith
1958	J.R. Wilson and R.T. Beck	1985-1986	Jerry Keil
		1986-1987	Dave Baumann
		1987-1988	Gary Shaffer
		1988-1989	Norm Almquist
		1989-1990	Mike Zeller
		1990-1991	Linda Osborn
		1991-1992	Michael Haughey
		1992-1993	Kraig Haynes
		1993-1994	Mark Jelinske
		1994-1995	Dave Olson
		1995-1996	Roger Hubert
		1996-1997	Randy Wartner
		1997-1998	Scott Spinney
		1998-1999	Tim Moormeier
		1999-2000	Scott Lohr
		2000-2001	Mike Day
		2001-2002	Kate Allen
		2002-2003	Mike Fulton
		2003-2004	Kevin Ainsworth
		2004-2005	David Rodenberg
		2005-2006	John Stumpf
		2006-2007	Kevin Parrot
		2007-2008	Brian Lynch
		2008-2009	Scott Martin
		2009-2010	Justin Dunkin
		2010-2011	Ken Urbanek

#### Rocky Mountain Chapter of ASRE: Organized 1954

1954	L. Hough	1989-1990
1955	B.H. Spurlock, Jr.	1990-1991
1956	V.J. Johnson	1991-1992
1957	W.S. Langbartel	1992-1993
1958	J.V. Berger	1993-1994

#### Rocky Mountain Chapter of ASHRAE from Merger in 1959 of ASHAE and ASRE:

1959	R.J. Walker	1998-1999
1960	L.R. Binder	1999-2000
1961	(July-Dec) J. Reed	2000-2001
1962	(Jan-June) R.F. Pritchard	2001-2002
1962-1963	L.D. Niblack	2002-2003
1963-1964	J.L. Crellin	2003-2004
1964-1965	M.D. Beckett	2004-2005
1965-1966	B.P. McMenary	2005-2006
1966-1967	S.P. Mitchell	2006-2007
1967-1968	F.A. Frauenfelder	2007-2008
1968-1969	J.D. McFall	2008-2009
1969-1970	D.L. Rose	2009-2010
1970-1971	R.D. Paglisotti	2010-2011

# ASHRAE SOCIETY NEWS AND PRESS RELEASES

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For Release:  
March 23, 2011

Contact Jodi Scott  
Public Relations  
678-539-1140  
[jscott@ashrae.org](mailto:jscott@ashrae.org)

## **Do Clothes Make the Man Hotter or Cooler? Role of Fashion in Thermal Comfort Studied by ASHRAE**

ATLANTA – The role of international fashions in determining how cool or hot we are is being studied by ASHRAE. It's not the impact of Gucci or Channel on our style but rather how non-western wear, such as burqas or saris, affects our thermal comfort.

Comprehensive data exists on western clothing insulation values but little research exists on non-western. Having information on attire like saris could influence the design of ventilation and air-conditioning systems to provide the best thermal comfort for occupants.

“Given the growing energy needs of large nations such as India, China and Pakistan, all of which often have different clothing styles from western nations, knowing more about the impact of clothing on comfort is essential to improving ventilation and air-conditioning systems for these countries,” John Stoops, head of the project monitoring subcommittee for Technical Committee 2.1, Physiology & Human Environment, which is overseeing the project, said. “The project also will look at how different fabrics and body postures and movements impact the insulation value of cloth. We expect to find that the results of non-western wear on thermal comfort will be different than that of western wear due to looser fit, long gowns and lighter materials that promote movement of air.”

1504-TRP, “Extension of the Clothing Insulation Database for Standard 55 and ISO 7730 to Provide Data for Non-Western Clothing Ensembles, Including Data on the Effect of Posture and Air Movement on that Insulation,” is one of 17 projects currently out for bid by ASHRAE. The deadline to submit proposals for all projects is May 16.

Results of 1504 would be of fundamental importance to both ASHRAE and the International Organization of Standardization (ISO) standards, building and building system designers and vehicle designers around the world. Specifically, it could expand the scope and reach of ASHRAE Standard 55, *Thermal Environmental Conditions for Human Occupancy*, to a worldwide audience.

Other projects open for bid are:

- 1399-TRP, “Survey of Particle Production Rates from Process Activities in Pharmaceutical and Biological Cleanrooms,” responsible committee: TC 9.11, Clean Spaces
- 1410-TRP, “Effect of System Chemicals toward the Breakdown of Lubricants and Refrigerants,” TC 3.2, Refrigerant System Chemistry
- 1413-TRP, “Developing Standard Procedures for Filling Climatic Data-Gaps for Use in Building Performance Monitoring and Analysis,” TC 4.2, Climatic Information
- 1458-TRP, “Modeling Person-to-Person Contaminant Transport in a Mechanical Ventilation Space,” TC 4.10, Indoor Environmental Modeling
- 1495-TRP, “Effect of Lubricant on the Distribution of Water Between the Vapor and Liquid Phases of Refrigerants,” TC 3.3, Refrigerant Contaminant Control
- 1499-TRP, “The Effect of Humidity on the Reliability of ICT Equipment in Data Centers,” TC 9.9, Mission Critical Facilities, Technology Spaces and Electronic Equipment
- 1550-TRP, “Thermal Performance of Insulating Coating,” TC 1.8, Mechanical System Insulation
- 1557-TRP, “Lab Comparison of Relative Performance of Gas Phase Filtration Media at High and Low Challenge Concentrations,” TC 2.3, Gaseous Air Contaminants and Gas Contaminant Removal Equipment
- 1564-TRP, “Measurement of Oil Retention in the Microchannel Heat Exchanger,” TC 8.4, Air to Refrigerant Heat Transfer Equipment
- 1565-TRP, “Development of the ASHRAE Design Guide for Dedicated Outdoor-Air Systems,” TC 8.10, Mechanical Dehumidification Equipment and Heat Pipes
- 1581-TRP, “Develop Alternate Set-up Guidelines for Unitary Air Conditioner Test Configurations Which Cannot Adhere to ASHRAE Standards 37 and 116 Specified Duct Dimensions and External Pressure Tap Locations,” TC 8.11, Unitary and Room Air Conditioners and Heat Pumps
- 1584-TRP, “Assessment of Alternative Approaches to Predicting the Burning Velocity of a Refrigerant,” TC 3.1, Refrigerants and Secondary Coolants
- 1592-TRP, “CHP Design Guide – Update to the Cogeneration Design Guide (1996),” TC 1.10, Cogeneration Systems

- 1603-TRP, “Role of HVAC Systems in the Transmission of Infectious Agents in Buildings and Intermodal Transportation,” TC 9.3, Transportation Air Conditioning
- 1604-TRP, “Demand Controlled Filtration for Clean Rooms,” TC 9.11, Clean Spaces
- 1606-TRP, “Laboratory Testing of Flat Oval Transitions to Determine Loss Coefficients,” TC 5.2, Duct Design

ASHRAE, founded in 1894, is an international organization of some 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 Release:  
March 18, 2011

Contact Jodi Scott  
Public Relations  
678-539-1140  
[jscott@ashrae.org](mailto:jscott@ashrae.org)

*New ASHRAE Guideline Published*

**ASHRAE Guideline Addresses Interactions Affecting Indoor Environmental Quality**

ATLANTA – ASHRAE has published a new guideline that provides guidance on achieving good indoor environments by considering the interactions of air quality and thermal conditions, as well as lighting and acoustics. Guideline 10 is especially important in the design of low-energy buildings in order to ensure full consideration of indoor environmental quality and its effects on occupants.

ASHRAE Guideline 10-2011, *Interactions Affecting the Achievement of Acceptable Indoor Environments*, calls attention to many interactions that designers might not have previously recognized or understood. The guideline contains an assembly of available knowledge on the complexity of the indoor environment and its impact on building occupants.

“The guideline summarizes what research and experience have taught us about the complex interplay of the wide range of factors that determine occupants’ reactions to the buildings they inhabit,” Hal Levin, chair of the committee writing the guideline, said.

Levin explains that the guideline is intended to help users understand and use existing documents that deal with indoor environments, including the ASHRAE standards related to energy, ventilation, indoor air quality and thermal conditions with a more complete understanding of their combined effects on occupants.

“It can provide assistance to building design professionals and building operators by making them aware of the major interactions that have the potential to impact the indoor environment,” he said. “We believe the guideline will help draw attention to the narrowly-defined scopes of the widely-used standards and the significance of combined or interactive effects in determining the acceptability of an indoor environment.”

The cost of Guideline 10-2011, *Interactions Affecting the Achievement of Acceptable Indoor Environments*, is \$54 (\$46, ASHRAE members). To order, contact ASHRAE Customer Service at 1-800-527-4723 (United States and Canada) or 404-636-8400 (worldwide), fax 404-321-5478, or visit [www.ashrae.org/bookstore](http://www.ashrae.org/bookstore).

ASHRAE, founded in 1894, is an international organization of some 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.

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# EMPLOYMENT LISTINGS 2011

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Position(s): Outside Sales Engineer  
Company: Ace Mechanical Equipment, Inc.  
Location: Golden, Colorado  
Contact: [Careers@acemechanical.com](mailto:Careers@acemechanical.com)  
More Info:

Outside Sales Engineer –

<http://www.rockymtnashrae.com/wp-content/uploads/2010/06/Outside-Salesman-ad2.pdf>

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Position(s): Senior Mechanical Engineer, Healthcare  
Company: Scanlon Szynskie Group, Inc.  
Location: Aurora, Colorado  
Contact: <mailto:paula@ssgroupinc.com>  
More Info:

Senior Mechanical Engineer, Healthcare –

<http://www.rockymtnashrae.com/wp-content/uploads/2010/06/SSG-combined-mech-engineer-request-2011.011.pdf>

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Position(s): Mechanical Project Engineer  
Company: Scanlon Szynskie Group, Inc.  
Location: Aurora, Colorado  
Contact: <mailto:paula@ssgroupinc.com>  
More Info:

Mechanical Project Engineer –

<http://www.rockymtnashrae.com/wp-content/uploads/2010/06/SSG-combined-mech-engineer-request-2011.011.pdf>

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Position(s): Senior Commissioning Manager  
Company: Farnsworth Group  
Location: Denver, Colorado  
Contact: [acrandell@f-w.com](mailto:acrandell@f-w.com)  
More Info: [www.f-w.com](http://www.f-w.com)

Senior Commissioning Manager –

<http://www.rockymtnashrae.com/wp-content/uploads/2010/06/Sr-Engineering-Manager-Denver-CO5.pdf>

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Position(s): Application Engineer/Estimators and Account Managers  
Company: Setpoint Systems  
Location: Littleton, Colorado  
Contact: [info@setpointsystems.com](mailto:info@setpointsystems.com)  
More Info: [www.setpointsystems.com](http://www.setpointsystems.com)

Application Engineer/Estimators and Account Managers –

[http://www.rockymtnashrae.com/wp-content/uploads/2010/06/ASHRAE-Acct-Mgr\\_-Eng-Ad1.pdf](http://www.rockymtnashrae.com/wp-content/uploads/2010/06/ASHRAE-Acct-Mgr_-Eng-Ad1.pdf)

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Position(s): Mechanical Engineer  
Company: EV Studio  
Location: Denver, Colorado  
Contact: [sean@evstudio.com](mailto:sean@evstudio.com)  
More Info:

Mechanical Engineer –

<http://www.rockymtnashrae.com/wp-content/uploads/2010/06/mechanical-engineer-ad.pdf>

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Position(s): Energy Efficiency Engineer  
Company: Xcel Energy  
Location: Denver, Colorado  
Contact: [recruiting@xcelenergy.com](mailto:recruiting@xcelenergy.com)  
More Info:

Mechanical Engineer –

<http://www.rockymtnashrae.com/wp-content/uploads/2010/06/21197-Energy-Efficiency-Engineer-Xcel-Energy.pdf>

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Position(s): Commissioning Engineer  
Company: McKinstry  
Location: Denver, Colorado  
Contact: [mckhr@mckinstry.com](mailto:mckhr@mckinstry.com)  
More Info:

Mechanical Engineer –

[http://www.rockymtnashrae.com/wp-content/uploads/2010/06/Cx\\_Engineer-\\_1017.pdf](http://www.rockymtnashrae.com/wp-content/uploads/2010/06/Cx_Engineer-_1017.pdf)

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Position(s): Commissioning Services Leader  
Company: Beaudin Ganze Consulting Engineers  
Location: Denver, Sacramento, or Albuquerque  
Contact: [brbaugh@bgce.com](mailto:brbaugh@bgce.com)  
More Info:

Mechanical Engineer –

<http://www.rockymtnashrae.com/wp-content/uploads/2010/06/201101CxAServiceLeader.pdf>

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# ODDS AND ENDS

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## **Voting this month to induct the next member to the Chapter Board of Governors:**

The nominating committee recommends that Megan Van Wieren be voted onto the chapter's board of governors for the several year term of service toward becoming chapter president. Megan Van Wieren, CEM, LEED AP is a Project Manager for Eaton Corporation. Megan received her Bachelor of Science degree in Mechanical Engineering from the University of Michigan. She is experienced in the design and assessment of energy efficient building systems including retro-commissioning, energy analysis, sustainability consulting, and mechanical system design. Megan has volunteered her time with the Rocky Mountain ASHRAE chapter for the past three years on Sustainable Engineering Committee and is currently serving as the chair. She is active in the ASHRAE Sustainability Project 2013 that will be showcased at the ASHRAE 2013 summer meeting held in Denver. Megan also participates on the committee for Commercial Building Energy Audit Procedures under the ASHRAE Technical Committee 7.6 – Building Energy Performance.



## **Tour & Anderson Hydronic College Seminar:**

The Tour & Anderson Hydronic College will present the seminar "The Three Hydronic Conditions" in Denver on March 29<sup>th</sup>, in the Budweiser Champions Club at Invesco Field, from 2-8 p.m. The TA Hydronic College has been an education resource for hydronic engineering in Europe and other world markets, attended by over 3,000 design and facility engineers annually. In 2010, TA began presenting the seminars in North America, in concert with Victaulic. The seminar is free, and is presented vendor-neutral. Certificates of Attendance are provided for PDH. Seminar attendees will receive complimentary dinner and refreshments, and a copy of the reference book "Total Hydronic Balancing" by Robert Petitjean. To register or learn more about the seminars, visit <http://www.TAHydronicCollege.com>!

## **ASHRAE Jobs Website Tool:**

We thought you and your fellow members would like to know about this valuable tool for ASHRAE Members and HVAC&R hiring authorities. We have prepared a page detailing the story of [ASHRAEjobs.com and its success here](#).

The Career Center offers several benefits for hiring authorities and job seekers:

- ASHRAE Jobs is user friendly. Its products and services equal the offerings from traditional big box boards such as Monster.com, yet its information and postings are specific to the ASHRAE Community.
- Due to its focus on HVAC&R engineering, Job seekers have a more effective search experience. Employers also have immediate access to a pre-filtered pool of talent for skills and experience.
- A unique feature is ASHRAE members are highlighted in search results. The online job application and resume forms require applicants to identify themselves by membership status. Employers can sort applications and resumes by membership status.

I would invite your Chapter to participate in this program by creating a link on your website to the ASHRAE Jobs Career Center. You will find attached a copy of the logo to use on your homepage. We would also appreciate your help to spread the news about ASHRAE Jobs' success through an announcement through your eNewsletter, blogs, etc.

If you have questions, I or John von Harz (Services Manager at [jvonharz@ashraejobs.com](mailto:jvonharz@ashraejobs.com)) will be pleased to answer them.



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### *High Performance Building Program Quick Links (details below)*

- *Case Studies free on [Program Resources](#) page*
- *[Colo. Springs](#) workshop on major renovations planned for March 31*
- *N. Colo USGBC plans [LEED discussion](#) for subcontractors*
- *[Beyond the Building](#) webinar scheduled for April 27*

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### *New Case Studies available on High Performance projects*

Compare your projects to 11 GEO Case Studies. Each High Performance Case Study is an in-depth investigation of a specific high performance building project with a focus on its key lesson or differentiator, designed to illuminate the process and the outcomes. These two-page synopses present energizing examples of what is possible in Colorado's built environment.

[Alta Vista Charter School](#)  
[Anythink Brighton Library](#)  
[Baby Haven Childcare](#)  
[Douglas County Prototype School](#)  
[Durango Discovery Museum](#)  
[Mancos Library](#)  
[Nederland Community Library](#)  
[Nederland Wastewater Treatment Facility](#)  
[NREL Research and Support Facility](#)  
[Sangre De Cristo Pre K - 12 School](#)  
[Sargent Junior-Senior High School](#)

Please visit the [Program Resources page](#) on the GEO website for additional project tools.

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### *Join Northern Colorado USGBC chapter for LEED event*

Are LEED Submittals stressing you out? Join U.S. Green Building Council Colorado Northern Branch to learn the ins and outs of producing a great LEED Submittal. A panel of experts will explore and explain often overlooked details that can help you produce comprehensive submittals that are approved faster and with fewer revisions.

#### **Speakers:**

The Colorado State University Institute for the Built Environment will present a brief presentation on LEED Submittals. This will be followed by a panel discussion with experts from Dohn Construction, Preview Architecture, Holsinger Drywall and Wray Plumbing & Heating who will discuss their submittal process based on the Rocky Mountain Innosphere, a LEED registered project.

Date & Time: Wednesday, March 30; 7:30 - 9 a.m.

Location: The Ranch, 4H Building, Loveland, Colorado

Cost: USGBC Colorado Members: FREE; Non-members: \$5 (or \$10 at the door)

Students: FREE

[Register Online and Save](#)

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## *Deep Energy: Major Renovations planned for Colo. Springs*

Now approved for AIA LUs and USGBC CEUs

This workshop will present a detailed overview of energy renovations for a variety of commercial building types. Presenters will illustrate the process and benefits of an energy audit, energy renovations and retrofits. Energy modeling and the decision making processes will be reviewed. How to create and implement a deep energy major renovation plan will also be addressed. The GEO recommends building owners and operators, architects, energy auditors, sustainability consultants, and contractors to attend.

Date & Time: Thursday, March 31; 8:30 - 11:30 a.m.

For more information and registration, please visit our [registration page](#).

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## *Beyond the Building: The Occupant Factor 201 webinar slated for April 27*

Your building is only as 'High Performance' as its occupants. But how do you get a handle on the human behaviors that impact energy consumption within the space? "Beyond the Building: The Occupant Factor 201" delves into the mysteries of the living, breathing, window-opening people. A designer, professor and anthropologist uncover the factors that drive individuals to work with, or against, their surroundings to conserve energy.

From the design process to post-occupancy evaluations and occupant training, this free 90-minute webinar hosted by the Governor's Energy Office High Performance Building Program will cover the basics of human behaviors within buildings, design strategies, post-occupancy evaluations and advanced planning. Architects, Building Owners, Engineers, Sustainability Consultants and Contractors are encouraged to attend.

Date & Time: Wednesday, April 27, 2011; 11:30 a.m. - 1 p.m. MDT

For more information and registration, please visit our [registration page](#).

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## **Growing Library of Tools and Resources at your fingertips**

Check out the latest project resources from the GEO High Performance Building Program

### Case Studies

- [Alta Vista Charter School](#)
- [Anythink Brighton Library](#)
- [Baby Haven Childcare](#)
- [Douglas County Prototype School](#)
- [Durango Discovery Museum](#)

- [Mancos Library](#)
- [Nederland Community Library](#)
- [Nederland Wastewater Treatment Facility](#)
- [NREL Research and Support Facility](#)
- [Sangre De Cristo Pre K - 12 School](#)
- [Sargent Junior-Senior High School](#)

Intros to non-traditional building concepts

- [Solar Photovoltaics](#)
- [Energy Modeling](#)
- [Energy Modeling Software](#)

RFP Language for High Performance project team members

- [Architect](#)
- [General Contractor](#)

Contractor's tools in the kit include:

- LEED® [GEO Materials Verification Form and Workbook](#) for the contractor responsible for documentation to use for tracking products and waste during construction.
- LEED® [VOC limit job poster](#) indicates the project is a LEED® project and notes Volatile Organic Compound (VOC) levels that cannot be exceeded for particular products
- [VOC Pocket reference forms](#) for VOC limits by product to take to the building supply store
- LEED® [VOC Reference Sheet](#) that includes limits, as well as, which credits each product references
- LEED® [Materials Cheat Sheet](#) that acts as a quick reference based on what a product contains so that contractors can easily choose the appropriate credit

Additional items are also available on our [Program Resources](#) page.

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## New Archives Now Available

New presentations are available for the following webinars and workshops:

[Energy Water Nexus 201](#)  
[High Performance Codes](#)  
[Recharging Historic Buildings](#)

For all High Performance Building presentation PDFs, visit the [Workshops & Webinar](#) page.  
 To view the video archives please visit the [Video](#) page.

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**Earth Week Offsets: Offset Your Energy Use over April 18-24**  
**Reinvest in Colorado this April by Supporting New Clean Energy Projects in Colorado**

The [Colorado Carbon Fund](#) (CCF) has a strong list of potential carbon offset and renewable energy projects in the pipeline for review and funding, including innovative projects such as coal mine methane gas capture and anaerobic digestion plants. These projects are, and always will be, located throughout Colorado. We just need the funds to develop them. That's the mission behind the CCF Earth Week Campaign. The campaign asks individuals and businesses to voluntarily offset their emissions for the week of Earth Day (April 18-24).

You don't have to wait: Offset a week of energy use now at [www.coloradocarbonfund.org](http://www.coloradocarbonfund.org) and credit Earth Day Offsets.

For an average Coloradoan, it's not much: based on Sopris Foundation [calculations](#), offsetting one's entire emissions for the week of Earth Day costs \$10; for a family of 4, \$40. This calculation even includes the energy used to get your food to your plate. If you are a business and would like to participate, we have ideas for you. Call us at (303) 866-2264 or email us at [ccf@state.co.us](mailto:ccf@state.co.us).

For every dollar received, a dollar will be spent on building clean energy projects in Colorado creating jobs, reducing emissions, and bringing Colorado's clean energy future that much closer to reality. All participants will be recognized in print, social and website media, and organizations will be invited to a reception at the Governor's mansion on June 24 to share results and acknowledge participation.