



# March 2017

<u>Denver Dinner Meeting Information</u>	<u>Fort Collins Lunch Meeting</u>
<p><b>DATE:</b> March 1<sup>st</sup> 2017</p> <p><b>TIME:</b> 5:00-6:00 Social hour            6:00-6:30 Dinner/Announcements/Raffle            6:30 Presentation Starts</p> <p><b>LOCATION:</b> Jackson's Sports Rock  <a href="#">1520 20th Street</a>            Denver, CO 80202</p> <p><b>RSVP:</b> <a href="#">March 2017 Denver Dinner Meeting</a></p> <p><b>COST:</b> \$25 Rocky Mtn Chapter Members            *Reservation made by 5:00 PM on Monday  <b>\$35 Non-members and late reservations</b>            \$20 Students</p>	<p><b>DATE:</b> March 1<sup>st</sup> 2017</p> <p><b>TIME:</b> 12:00PM – 1:00PM</p> <p><b>LOCATION:</b> First Bank Old Town  <a href="#">100 South College Ave</a>            Fort Collins, CO 80524</p> <p><b>RSVP:</b> March 2017 Denver Lunch Meeting</p> <p><b>COST:</b> \$15</p> <p>Check out the calendar for other upcoming events.</p>
<p style="text-align: center;"><u>Upcoming Events</u></p> <p style="text-align: center;"> <a href="#">ASHRAE DU Hockey Game.....February 24<sup>th</sup></a>  <a href="#">April Lunch Meeting.....April 5<sup>th</sup></a>  <a href="#">ASHRAE Webcast: Take Control.....April 20<sup>th</sup></a> </p>	

## Meeting Information

**“TBD”**

Due to a last minute cancellation, the new speaker and topic will be announced when it is finalized.

## President's Message

Hello Rocky Mountain ASHRAE,

Our next chapter meeting will be on Wednesday March 1, 2016. You can register to attend the Ft. Collins lunch or Denver dinner presentation on the [www.rockymtnashrae.com](http://www.rockymtnashrae.com) website under the meetings tab.

The ASHRAE 2017 Winter Conference was held in Las Vegas from January 28 – February 1. The Rocky Mountain Chapter and its members received several distinguished awards:

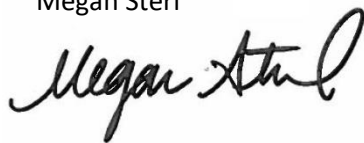
**Dave Olson Receives ASHRAE Fellow Award.** Congratulations Dave and thank you for your many years of service! This distinguished award is reserved for ASHRAE members who have attained distinction in the fields of heating, refrigeration, air conditioning, ventilation or the allied arts and sciences through invention, research, teaching, design, original work, or as an engineering executive on projects of unusual or important scope. The individual must have made substantial contributions.

**Western Mechanical Solutions Recognized at Prestigious Golden Circle Investor Level.** For their generous donation of \$10,000 to the 2016 Research Promotion Campaign, Western Mechanical Solutions received the Golden Circle award. Western Mechanical Solutions is the first Golden Circle donor in the Rocky Mountain Chapter. The Rocky Mountain Chapter and the Research Promotion campaign thank you!

**Rocky Mountain Chapter Remains Top Research Promotion Supporter.** The Rocky Mountain Chapter was again the top fundraiser in the world, raising \$113,803 during the 2016 Research Promotion campaign. Megan Sterl and Tony Anderson accepted the Bobbie J. Vermillion Pinnacle Award on behalf of the Chapter. Thank you to all the donors and supporter throughout the Rocky Mountain Chapter!

If you have any recommendations, comments, and/or suggestions on how to improve our chapter, please do not hesitate to let me know.

Megan Sterl



Rocky Mountain Chapter ASHRAE President

### 2017 TECHNICAL CONFERENCE

Mark your calendars now for the 2017 Technical Conference on Friday April 28, 2017 at the Sheraton Denver West hotel. More details to come.

### CHAPTER EVENTS

Below is the schedule for the remaining Chapter events, mark your calendars now!

**03/01/17** – Ft Collins Lunch & Denver Dinner

**04/05/17** – Denver Lunch

**04/21/17** – FREE ASHRAE Webcast

**04/28/17** – Technical Conference

**05/03/17** – Ft Collins Lunch & Denver Dinner

**06/03/17** – Kickball Tournament

**08/21/17** – Golf Tournament





# **VENDOR SAVE THE DATE 2017 ASHRAE TECHNICAL CONFERENCE**

## **WHEN**

**April 28, 2017**

## **WHERE**

**Sheraton Denver  
West Hotel**

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

## **NEW – KEYNOTE SPONSORSHIP!**

**Lunch and Afternoon Keynote Sponsors · (2) Sponsors  
Available · \$2,500 Minimum · Sponsorship Awarded to  
(2) Highest Bidders**

## **SPONSORS**

**Booth \$875  
Break \$250  
Happy Hour \$400**

## **BENEFITING**

**ASHRAE Research  
Promotion**

## **CONTACT**

**Vendor Liaison:  
Brook Zion  
BZion@swansonrink.com  
(303) 839-2958**

**Technical Conference  
Committee Chair:  
Tony Anderson  
TechConference@Rocky  
MtnASHRAE.com  
(303) 280-1401**

# THANK YOU!

## 2015/2016 Top Research Promotion Donors



**CFM COMPANY**

**LONG**

*Technology for Better Buildings*



**Western Mechanical Solutions**  
SUSTAINABLE HEATING COOLING

**Western Mechanical Solutions \$10,000**

**CFM Company Denver \$7,800**

**LONG Building Technologies \$6,175**

**McNevin Company \$3,525**

**Air Purification Company \$2,150**

**MTECH Mechanical \$2,000**

**The RMH Group \$2,000**



**mcnevin co.**  
manufacturers representative  
*more than product alone®*



**Air Purification Company**



**Thank you to all 2015/2016 donors for helping the Rocky Mountain Chapter raise \$113,803 for ASHRAE Research Promotion.**



## THANK YOU Recent 2016-2017 Donors!

During the 2015-2016 year the Rocky Mountain Chapter again raised over \$100,000 for ASHRAE Research. This would not be possible without the support of our sponsors.

### ASHRAE Research

Did you know – RP is short for **Resource Promotion**? The RP Campaign is an annual fundraising campaign benefiting the funding of numerous ASHRAE Programs. You can earmark your donation to support a specific program.

#### ASHRAE Research

##### The Backbone of ASHRAE

160 active or recently completed projects valued at \$14+ million  
Rocky Mountain (Region IX) gets back \$3 for every \$1 raised

#### ASHRAE Foundation

##### Supporting Research Forever

Permanently endowed funds with a 5% return  
Ideal way to secure an Honor Roll contribution into perpetuity

#### ASHRAE Scholarships

##### Supporting the Industry's Students

Supporting Undergraduate Students via ASHRAE owned Scholarships

#### YEA! (Young Engineers in ASHRAE)

##### Supporting the Future

Members who are 35 & younger.  
Supports: Leadership Weekend, Industry Training, Professional Development, ASHRAE Membership

#### Education (ASHRAE Learning Institute)

##### Supporting the Ever-Changing Industry

Certification  
Continuing Education  
Introduction to the industry

#### General Funds

##### Supporting the Industry

Large research projects  
Education programs

**The 2016-2017 goal is to raise over \$105,000.  
PLEDGE YOUR SUPPORT TODAY!**

The following individuals and companies have generously supported ASHRAE RP and the Rocky Mountain Chapter for the 2016 – 2017 Campaign.

Your contributions are appreciated. Thank you for making a difference and shaping tomorrow's built environment.

**ORGANIZATIONS**

**\$5,000 and Up**

Western Mechanical  
CFM Company Denver  
LONG Building Technologies

**\$2,500 to \$4,999**

McNevin Company

**\$1,000 to \$2,499**

Air Purification Company  
MTech Mechanical  
The RMH Group  
SBSA Inc.  
SMACNA

**\$500 to \$999**

Spec Tech Sales  
Haynes Mechanical Systems

**\$250 to \$499**

Neuworks Mechanical  
Complete Mechanical Balancing

**\$150 to \$249**

**INDIVIDUALS**

**\$250 to \$999**

Mr Scott Martin  
Mr Ken A Urbanek

**\$101 to \$249**

Mr Michael K Fulton  
Ms Michelle Swanson  
Mr David A Willets, Ret

**\$0 to \$100**

Mr Roger Abrahamson  
Mr Tony K Anderson  
Mr Richard D Apple  
Mr Richard Barnett  
Mr Adam S Bishop  
Mr Trevor J Bromberg  
Mrs Laura Dyas  
Ms Sara A Frame  
Mr Mark G Golnar, PE  
Mr Michael Haughey  
Mr Michael J Harrington, PE  
Mr Jeff R Jackson  
Mr Mark E Labac  
Mr Kyle Manske  
Mr Scott McQuoid  
Mr Leonard V Micek, PE  
Mr Eugene Mitchell  
Mr Juan M Moreno  
Mr John P Morris, PE  
Ms Erica Moser  
Mr David R Olson  
Mrs Megan L Sterl

## ORGANIZATIONS

## INDIVIDUALS

### \$0 to \$100 (cont)

Ms Gretchen R Toshach

Mr Randall J Wartner

Mr Aaron M Zimmerman

Individual contributions of \$100 or more and Corporate contributions of \$250 or more receive this year's Commemorative Coin and Honor Roll Contribution status. Donations are tax deductible, by check or credit card online at: [www.ashrae.org/contribute](http://www.ashrae.org/contribute)

Donations are tax deductible, by check or credit card online at: [www.ashrae.org/contribute](http://www.ashrae.org/contribute)

For questions please visit the ASHRAE RP website

<https://www.ashrae.org/rp>

or contact Tony Anderson at:

[tanderson@amimechanical.com](mailto:tanderson@amimechanical.com) or 303-419-3061

### ***Sustainable Engineering Committee***

The **Sustainable Engineering Committee** is committed to advocate sustainable design, construction and operation to our members, the industry and our community through advocacy group meetings and educational seminars. We strive to promote sustainable practices at all ASHRAE events and sponsored activities.

This committee meets a couple times a year and as needed for planning and coordination of future sustainability projects. If you have questions about the committee or would like to be added to the contact list, please contact:

Kate Du Mez, Sustainable Engineering Committee Chair

303-796-6008

email: [sustainable@rockymtnashrae.com](mailto:sustainable@rockymtnashrae.com).

---

### **2016-2017 SEC Committee Meetings**

The Sustainable Engineering Committee's function within the Rocky Mountain ASHRAE chapter has been to promote sustainability in chapter events and the community, and to advocate for sustainability in local government. This year the committee will be meeting at strategic times throughout the year to enable us to plan and support specific events, the largest of which has typically been the local Technical Conference in the spring.

If you have any ideas for events or community outreach programs you would like the SEC to be involved with or support, please contact Kate DuMez, the SEC chair.

If you would like to be involved with the SEC or come to a happy hour meeting to see what it's all about, please contact Kate to be added to the email distribution list.

## ***Young Engineers in ASHRAE (YEA)***

### **HVAC on Tap – Thank You!**

Thank you to Kate Allen of Deerns America for her presentation at last month's HVAC on Tap! We had great attendance for her presentation on becoming rainmakers for our companies! Thank you also to Western Mechanical Solutions for sponsoring the event.

Stay tuned for our HVAC on Tap event!

---

### **Mile High Stadium Tour**

The Rocky Mountain ASHRAE YEA committee has organized a site tour of Mile High Stadium! Details are below:

When: Friday, April 14<sup>th</sup>, 2017 at 1 pm

Where: Mile High Stadium, 1701 Bryant St, Denver, CO 80204

Please RSVP to [YEA@RockyMtnASHRAE.com](mailto:YEA@RockyMtnASHRAE.com) to reserve a spot!

---

### **Fourth Annual Kickball Tournament!**

Saturday, June 3<sup>rd</sup>, 2017 – Save the Date!

Registration is open on the website [here](#). We are also in need of sponsors to make this event a success! Sponsorships can be made through the chapter website [here](#).

To all who have played in the past, we look forward to having everyone out again this year! And for anyone who hasn't made it out yet, this day is absolute blast of fun in the sun to start off summer. Don't miss out!

---

### **PE Study Group**

Studying for the PE in April or next Fall? Join us for a 6 week study course taught by ASHRAE members and industry professionals who have passed the PE.

When: March 7, 14, 21, 28 and April 4 and 11, 5:30 pm to 7:00 pm

Where: Western Mechanical Solutions, 70 Broadway St, Denver, Colorado 80203

RSVP to [YEA@RockyMtnASHRAE.com](mailto:YEA@RockyMtnASHRAE.com) to sign-up for the classes.

---

### **Rocky Mtn ASHRAE Technical Conference Scholarship**

Interested in attending the technical conference in Denver this year? The deadline to apply for the scholarship for the Rocky Mountain ASHRAE Technical Conference is Friday, March 31. The Technical Conference is Friday, April 28 at the Sheraton Denver West Hotel in Lakewood. The scholarship covers the cost of attending the event. The application can be downloaded from the chapter website. Please submit applications to [Stephen.Mills@siemens.com](mailto:Stephen.Mills@siemens.com) by March 31.

---

## **Wanted!**

YEA is always looking for tour sites and hosts / presenters for HVAC on Tap. If you know of a great tour or want to host an HVAC on Tap, please let us know at [YEA@RockyMtnASHRAE.com](mailto:YEA@RockyMtnASHRAE.com).

---

## **Interested in Planning YEA Events?**

The YEA committee puts together all the events for the year and works to include young engineers into ASHRAE. We meet every 1-2 months, usually in conjunction with our events. If you are interested in joining this fun team, email us at [YEA@RockyMtnASHRAE.com](mailto:YEA@RockyMtnASHRAE.com) for more details.

## ***Government Affairs***

### **[New Better Buildings Resource Helps Organizations Find Financing Solutions for Energy Efficiency Projects](#)**

Last month, DOE launched the [Better Buildings Financing Navigator](#), an online tool that helps public and private sector organizations find financing solutions for energy efficiency projects. Through the Navigator, organizations can:

- Learn the basics of the energy efficiency financing market
- Explore and compare financing options, and find the ones that are a best fit for your organization
- Connect directly with financial allies who can provide those options.

[Read more](#)

---

### **[DOE Issues Notice of Permanent Rulemaking from DOE on Energy Conservation Standards for Consumer Central Air Conditioners and Heat Pumps](#)**

The *Federal Register*, published January 6, 2017, gave notice of permanent rulemaking from the US Department of Energy's Office of Energy Efficiency and Renewable Energy on Energy Conservation Standards for Consumer Central Air Conditioners and Heat Pumps. In this proposed rule, DOE proposes to amend the energy conservation standards for consumer central air conditioners and heat pumps identical to those set forth in a direct final rule published elsewhere in this *Federal Register*. If DOE receives an adverse comment and determines that such comment may provide a reasonable basis for withdrawing the direct final rule, DOE will publish a notice withdrawing the direct final rule and will proceed with this proposed rule.

DOE will accept comments, data, and information regarding the proposed standards no later than April 26, 2017. Comments regarding the likely competitive impact of the proposed standard should be sent to the Department of Justice before February 6, 2017 at [energy\\_standards@atr.usdoj.gov](mailto:energy_standards@atr.usdoj.gov).

For further information, contact:

Mr. Antonio Bouza, U.S. Department of Energy, Office of Energy Efficiency and Renewable Energy, Building Technologies Office, EE-5B, 1000 Independence Avenue SW., Washington, DC 20585-0121. Telephone: [\(202\) 586-4563](tel:2025864563). Email: [ApplianceStandardsQuestions@ee.doe.gov](mailto:ApplianceStandardsQuestions@ee.doe.gov).

or

Ms. Johanna Jochum, U.S. Department of Energy, Office of the General Counsel, GC-33, 1000 Independence Avenue SW., Washington, DC 20585-0121. Telephone: [\(202\) 287-6307](tel:2022876307). Email: [Johanna.Jochum@hq.doe.gov](mailto:Johanna.Jochum@hq.doe.gov).

To view the rule and additional information, click [here](#).

---

#### [Four U.S. Cities Pass New Building Efficiency Ordinances](#)

The Better Buildings Challenge's local government partners ended 2016 with a flurry of major energy efficiency measures that will drive significant energy performance improvements and provide models for other city action across the country. The cities include Denver, Los Angeles, Pittsburgh, and Orlando, Florida. [Read more](#).

### **Membership Promotion**

We would like time to welcome the following new ASHRAE members for the month of February:

- Shiri Choresh
- Jason Woods
- Wade McCorkel
- George Aiken
- Josh Furman
- Nicholas Alcantara

We would also like to welcome the following student members:

- Talia Cieth
- Mohammadhasan Fathollahzadeh
- Andrew Speake
- Isabella Ruggero Stahl
- Jonathon Stelling

If you have questions or need membership assistance please send an email to [membership@rockymtnashrae.com](mailto:membership@rockymtnashrae.com) or call Erin Hubl at 720-898-3156.

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.



Interested in being a Rocky Mtn Chapter member? [Check out the membership application](#)

## ***Student Activities***

We want to congratulate Dhruvad Parikh on his receipt of the Rocky Mountain ASHRAE Winter Conference Student Scholarship. Dhruvad is currently a student at CO School of Mines, and an active member of the Mines Student Chapter. Below is his article containing his experience at the meeting.

We would also like to congratulate Liping Wang for receiving \$5,000.00 for the ASHRAE Undergraduate Program Equipment Grant titled, **“Energy and thermal comfort evaluation for occupancy-based variable air volume system controls”**. Liping is a student at the University of Wyoming.

*By Dhruvad Parikh, recipient of the Rocky Mountain ASHRAE Winter Conference Student Scholarship*

The ASHRAE winter conference 2017 could not get any better venue than in the very famous ‘Sin City’ - Las Vegas. This conference is the largest gathering of the HVAC&R professionals from across the globe. People from varied professions - industries, university professors, researchers and students, attended this conference, making it a very unique conference with an outlook on academic and industrial collaboration. Many events took place at this conference, of which some were technical events while some were networking events. The technical events in this conference, such as seminars, workshops, forums, technical committees and conference paper session, went on for a week. And to complement these technical events, there were hospitality events like the region dinner, welcome party, president’s luncheon and the member’s night out, which helped members to interact with different people. In addition to these events, this conference also organized tours to places like Hoover Dam, MGM central plant, Caesars palace central plant, to name a few.

The session for students started with the ‘Students Welcome and Orientation’, which as followed by an amazing plenary session by the keynote speaker Adam Stelzner. The speech was highly inspirational, focusing on the significance of teamwork. The ‘Student/YEA Mixer’ was another interesting event, where we students got an opportunity to interact with the young engineers from the industry and learn more about the transition from being a student to working on actual projects as well as to understand the culture in an organization. The ‘welcome party’, ‘region dinner night’ and the ‘President’s luncheon’ were the key events that provided networking opportunities for students. Another fascinating event was the AHR expo, where companies showcase their cutting edge technologies and explain about their innovative equipments.

Overall, this scholarships from ASHRAE Rocky Mountain Chapter has provided a great exposure to me in the field of HVAC&R and energy modeling, enabled me to network with various industry personnel and enhance my knowledge in these fields. I appreciate the commendable effort by ASHRAE Rocky Mountain Chapter for students.

## ***Rocky Mountain ASHRAE History***

### **The True Purpose of Air Conditioning**

During those hot summer months when you are relaxing in the comfort of your cool house, you may find it interesting that the air conditioning system you are running was never intended for the purpose of keeping us comfortable. This commodity of air conditioning, which is now in almost 90% of American households was never intended for our homes, it was intended for pleasing paper in the factories. In 1902, Willis Carrier created the first air conditioning machine for a publishing company in New York that was having issues with their paper. The publishing company was having problems with

the paper expanding and contracting due to the hot humid conditions in the factory. The expanding and contracting of the paper caused the printing to be very poor quality, because the printers could never align the paper properly when multiple passes were required for different colors. Carrier's invention of air conditioning was able to take the humidity out of the air and fix all of the printing issues the publishing company was having. This ability to control the humidity in the air is a major aspect of what makes us comfortable on those hot summer days when we escape to our air conditioned homes. So this summer when you are sitting there reading a book in your house you can thank it for your comfort.



### ***ASHRAE Society News and Press Releases***

#### **ASHRAE Recognizes Members for Outstanding Industry and Society Achievements**

ATLANTA – Fifty-five people were recognized for their contributions to ASHRAE and the industry at the Society's 2017 Winter Conference, Jan. 28-Feb. 1, in Las Vegas, Nev.

Fellow ASHRAE is a membership grade that recognizes members who have attained distinction and made substantial contributions in HVAC&R such as education, research, engineering design and consultation, publications and mentoring. The Society elevated 22 members to the grade of Fellow:

- Charles S. Barnaby, Life Member, BEMP, a building software developer, Moultonborough, N.H.
- Charlene Warres Bayer, Ph.D., chairman and chief science officer, Hygieia Sciences LLC., Atlanta, Ga.
- Michel Bernier, Ph.D., P.E., a professor, Department of Mechanical Engineering, Polytechnique Montreal, Quebec.
- James J. Bushnell, Life Member, owner, HVAC Consulting Services, Solana Beach, Calif.

- Thomas D. Colvin, P.E., Life Member, senior consultant, Colvin Engineering Associates Inc., Salt Lake City, Utah.
- John F. Dunlap, P.E., BEAP, BEMP, CPMP, HBDP, HFDP, president, Dunlap & Partners Engineers, Richmond, Va.
- Steven J. Emmerich, group leader, Indoor Air Quality and Ventilation Group, National Institute of Standards and Technology, Gaithersburg, Md.
- Krishnan Gowri, Ph.D., principal engineer, Generative Design Group, Autodesk, Inc., San Francisco, Calif.
- John L. Harrod, P.E., Life Member, HFDP, Edmond, Okla.
- Eliseo Huergo, Ing., Life Member, president, Termair S.A., Buenos Aires, Argentina.
- Julia Keen, Ph.D., P.E., BEAP, HBDP, professor, Kansas State University, Manhattan, Kan.
- Thomas M. Lawrence, Ph.D., P.E., coordinator, Mechanical Engineering Program, University of Georgia, Athens, Ga.
- Zoltan Magyar, Ph.D., head of the Department of Building Energetics and Building Service Engineering, Budapest University of Technology and Economics, Budapest, Hungary.
- David R. Olson, P.E., vice president, PCD Engineering Services Inc., Longmont, Colo.
- Richard L. Pavlak, P.E. president, Heapy Engineering, Dayton, Ohio.
- Michael Rosenberg, senior research scientist, Pacific Northwest National Laboratory, Richland, Wash.
- Timothy A. Shedd, Ph.D., CEO and CTO, Ebulient Inc., Madison, Wis.
- Carey J. Simonson, Ph.D., P.E., professor, Department of Mechanical Engineering, University of Saskatchewan, Saskatoon, Saskatchewan, Canada.
- Robert L. Towell, P.E., commissioning program manager and vice president, CxE Group LLC., Edwardsville, Ill.
- Phillip M. Trafton, Life Member, principal, Donald F. Dickerson Associates, Tarzana, Calif.
- R. Vijayakumar, Ph.D., consultant in chief/founder, Aerfil LLC., Liverpool, N.Y.
- Fu-Jen Wang, Ph.D., P.E., professor, Department of Refrigeration, Air Conditioning and Energy Engineering, National Chin-Yi University of Technology, Taichung City, Taiwan.

The ASHRAE Technology Awards recognize outstanding achievements by ASHRAE members who have successfully applied innovative building designs. Their designs incorporate ASHRAE standards for effective energy management and indoor air quality and serve to communicate innovative systems design. Winning projects are selected from entries earning regional awards. First place recipients are:

- Kitaro Mizuide, Ph.D., P.Eng., general manager of mechanical and electrical engineering division, NIKKEN SEKKEI Ltd., Osaka, Japan, receives first place in the new commercial buildings category for the YKK80 Building, Tokyo. The building is owned by YKK Real Estate Co. Ltd.
- Adam C. S. Wheeler, P.E., principal, Sherrill Engineering Inc., San Francisco, Calif., receives first place in the existing building commissioning, other institutional buildings category for the University of California, San Francisco, Parnassus Services Seismic Replacement Building MBCx. The building is owned by the University of California, San Francisco.
- Bradford Crowley, P.E., associate principal, Ballinger, Philadelphia, Pa., receives first place in the new educational facility category for the Johns Hopkins University Undergraduate Teaching Laboratories, Baltimore, Md. The building is owned by Johns Hopkins University.
- Julien Allard, Eng., mechanical engineer, project manager and shareholder, Bouthillette Parizeau, Montreal, Quebec, receives first place in the new industry facilities or processes category for the Construction du Centre de transport Stinson, Montreal. The building is owned by the Societe de transport de Montreal (STM).
- Kurt Monteiro, P.Eng., HFDP, HBDP, Smith + Andersen, Toronto, Ontario, receives first place in the new health care facilities category for Humber River Hospital, Toronto. The building is owned by the hospital.

- Brian Rose, P.E., mechanical engineer, CMTA Inc., Cincinnati, Ohio, and Tracy Steward, mechanical engineer, CMTA Inc., Louisville, Ky., receive first place in the new commercial buildings category for the Cincinnati District 3 Police Headquarters – Net Zero Energy Building, Ohio. The building is owned by the City of Cincinnati.
- Shannon M. Allison, Integral Group, Oakland, Calif., receives first place in the existing commercial buildings category for 435 Indio Way, Sunnyvale, Calif. The building is owned by Huettig and Schromm Inc.

The 2016 Student Design Competition focused on a new 2-story municipal government building in Beijing, China.

First place in the HVAC Design Calculations category is awarded to the University of British Columbia. Team members are Alexander Brosky, Samarth Joshi, Aubrey McNeill, Silvia Odaya, Cheng Yang and Ziran Yu. Faculty advisors are Nima Atabaki, Ph.D., P.Eng., and Steven Rogak, Ph.D., P.Eng., while the industry advisor is Ali Nazari, P.Eng., BEMP, principal, Integral Group.

First place in the System Selection category is awarded to California State Polytechnic University, Pomona. Team members are Miro Zaroukian, Asped Khachatoorian, Christian Garcia, Sevan Hovsepian and Tade Mirzakhanyan. Advisors are Henry Xue, Ph.D., and Richard L. Gilbert, P.E., California Energy Designs Inc.

First place in the category of Integrated Sustainable Building Design is awarded to a team from the University of Central Florida. Team members are Logan G. Harrell, Gerald Hornik, Austin B. Christianson, Travis Kalikapersaud and Jeremy Palavecino. The faculty advisor is Muthusamy V. Swami, Ph.D., and the technical advisor is Nathaniel B. Boyd, P.E., CPMP.

The Applied Engineering Challenge for 2015-2016 required students to plan, develop and enact solutions to sustainability issues in their local or regional areas.

For the Applied Engineering Challenge, recipients are from the University of Regina, Saskatchewan – Bradley E.R. Lulik, Eva Rennie and Brent Yeske. Their faculty advisor is Adisorn Aroonwilas, Ph.D.

The E.K. Campbell Award of Merit honors an individual for outstanding service and achievement in teaching and is presented by the Life Members Club. The recipient is Thomas H. Kuehn, Ph.D., P.E., Fellow ASHRAE, Life Member, professor emeritus, Department of Mechanical Engineering, University of Minnesota, Minneapolis.

The John F. James International Award recognizes a member who has done the most to enhance the Society's international presence. The recipient is Gerald C. Groff, Fellow ASHRAE, Life Member, retired president/CEO, Marquardt Switches Inc., Cazenovia, New York.

The Milton W. Garland Commemorative Refrigeration Award for Project Excellence recognizes a non-comfort cooling refrigeration application that highlights innovation and/or new technologies in a unique manner. The recipient is Claude Dumas, P.Eng., Life Member, project engineer and an expert in skating rink refrigeration systems, City of Montreal, Montreal, Quebec.

The Comfort Cooling Award for Project Excellence recognizes the designer and owner of a comfort cooling application that highlights innovative and/or new technologies. The recipient is Andy Pearson, Ph.D., C.Eng., Fellow ASHRAE, group manager and director, Star Refrigeration Ltd., Glasgow, United Kingdom.

The ASHRAE Pioneers of Industry Award recognizes deceased individuals who have made milestone contributions to the growth of HVAC&R. Recipients are Carl Georg Munters (1897-1989), a founder of Munters AB whose inventions were based on simple heat and mass transfer with no refrigerants or compressors; and

Frederick Wittenmeier (1863-1928), a pioneer in development of carbon dioxide refrigerant systems and their application to comfort cooling for public buildings.

Honorary Members, elected by the Board of Directors are defined as notable persons of preeminent professional distinction. The recipient is Stephen T. Ayers, FAIA, architect of the Capitol, Architect of the Capitol, Washington, D.C.

---

## **Las Vegas Proves Big Winner for ASHRAE, AHR Expo and Industry**

ATLANTA – The 2017 ASHRAE Winter Conference and the AHR Expo saw record attendance with industry collaboration a strong focus of the events.

The 2017 ASHRAE Winter Conference took place Jan. 28-Feb. 1 at Caesars Palace with the ASHRAE co-sponsored AHR Expo held Jan. 30-Feb. 1 at the Las Vegas Convention Center. The two events exceeded their record-breaking attendance from the Conference and Expo that were held in Las Vegas in 2011.

In total, 3,579 people attended the Conference, making it the most well attended Winter Conference in recent years. The attendees represented 58 countries and included 537 first-timers.

The AHR Expo set several records, including attendance of more than 68,000 registered visitors and exhibitor personnel, as well as 500,159 square feet sold. The Show was by far the largest and best attended Expo in the Western states, with some 1,968 exhibiting companies.

The Conference also saw several collaborative efforts and agreements with associations and organizations from around the world.

“Partnering with allied organizations and associations better allows us to harness and adapt new technologies, which we can all use in working toward a more sustainable environment,” ASHRAE President Tim Wentz said. “By working together, we can create a worldwide best practices databank of innovative and successful technologies that can serve the built environment community.”

ASHRAE signed memoranda of understanding with several groups, including the United Nations Development Programme (UNDP), the Indian Society of Heating, Refrigerating and Air Conditioning Engineers (ISHRAE) and Association of German Engineers (VDI-GBG). The Society also signed a strategic partnership agreement with the Chartered Institution of Building Services Engineers (CIBSE) and the Federation of European Heating, Ventilation and Air-Conditioning Associations (REHVA). In addition, it updated its Work Plan with the United Nations Environmental Programme (UNEP).

As part of the event, the Clean Climate and Air Coalition (CCAC) held a Sustainable Technologies for Stationary Air Conditioning Workshop focused on climate-friendly and cost-effective air conditioning technologies. ASHRAE is an actor with CCAC.

At the Conference, Wentz provided updates on several Society initiatives and programs of importance to the industry.

Among them was creation of a new ‘ASHRAE University’ educational platform, which will locate all of ASHRAE’s educational products in one place where users can select the products to meet their professional goals. Additionally, a personal dashboard is built into the new platform allowing users to track their progress toward their goals. The new platform can be found at [www.ashrae.org/elearning](http://www.ashrae.org/elearning).

ASHRAE also has launched a new Technology Portal at [www.ashrae.org/technologyportal](http://www.ashrae.org/technologyportal). This gives ASHRAE members an easy, fast method of connecting to the latest information generated by ASHRAE's research program. It serves a central body of knowledge for ASHRAE technology and research products. It provides access to more than 1,700 Journal articles published since 1997 and more than 600 final reports from ASHRAE research projects.

Wentz, an associate professor at the University of Nebraska – Lincoln, also shared an update on a new, online internship job board. The new internship portal is found on ASHRAE's website at <http://jobs.ashrae.org>.

"I am big supporter of internship programs in that they are the easiest and most effective way to show students the importance of our work and why we are so passionate about what we do," he said. "Check it out and start looking for the next generation of engineers for your firm."

The Conference Bookstore featured several new standards of importance to the industry, including ANSI/ASHRAE/IES Standard 90.1-2016, *Energy Standard for Buildings Except Low-Rise Residential Buildings*, ANSI/ASHRAE 15-2016, *Safety Standard for Refrigeration Systems*, and its sister standard, ANSI/ASHRAE 34-2016, *Designation and Safety Classification of Refrigerants*, as well as User's Manuals for ANSI/ASHRAE Standard 62.1-2016, *Ventilation for Acceptable Indoor Air Quality* and ANSI/ASHRAE Standard 62.2-2016, *Ventilation and Acceptable Indoor Air Quality in Residential Buildings*.

The ASHRAE Learning Institute saw overall record attendance with top attended courses being Variable Refrigerant Flow System: Design & Applications, Designing High-Performance Healthcare HVAC Systems, Understanding & Designing Dedicated Outdoor Air Systems, Laboratory Design: The Basics and Beyond, and Designing Toward Net-Zero Energy Commercial Buildings.

The Technical Program featured some 350 presentations and 300 speakers. Top attended sessions included Blue Is the New Green: The Water-Energy "Next Is," Did It Really Work: Theory vs. Practice in Residential HVAC, Hydronic Water Flow Measurement, Recent Research in Data Center Cooling, When Good Valve Sizing Goes Bad, What Fire and Safety Engineers Have Learned Since the MGM Grand Fire in Las Vegas and What Are Present Day Fire and Life Safety Codes and Applications, Fresh Insights on Building Automation: A Seminar by the YEA Group, Modern Optimization Techniques for Hydronic Systems in Data Centers, Advancements in Ground Source Heat Pump Design, Energy Management: A Crucial Component of Operations and Maintenance, Commissioning a Central Chilled Water Plant and Data Driven Energy Auditing, Measurement and Verification.

The 2017 ASHRAE Annual Conference will take place June 24-28 in Long Beach, Calif., with the 2018 Winter Conference Jan. 20-24, and the AHR Expo, Jan. 22-24, in Chicago, Ill.

---

### **Preliminary Energy Savings Announced for ASHRAE/IES 2016 Energy Standard**

ATLANTA – More than 30 percent energy savings can be achieved using the 2016 version of Standard 90.1, according to recent analysis conducted by Pacific Northwest National Laboratories (PNNL) in support of the U.S. Department of Energy (DOE) Building Energy Codes Program.

An update on the preliminary results of the 90.1-2016 progress indicator report was made at the recent 2017 ASHRAE Winter Conference. ANSI/ASHRAE/IES Standard 90.1-2016, *Energy Efficiency Standard for Buildings Except Low-Rise Residential Buildings*, was published in October 2016.

PNNL conducted the energy savings analysis, using the 2004 standard as baseline. These results are considered preliminary and are expected to be deemed final in October 2017 when DOE publishes its final determination.

PNNL's analysis shows for the whole building energy consumptions, national aggregated site energy savings are 34.1 percent and energy cost savings are 34.2 percent, when compared to the 2004 standard.

"For more than 40 years, ASHRAE and IES members have strived to build upon the energy savings measures in each update of Standard 90.1, most recently released in its 10<sup>th</sup> edition," Tim Wentz, ASHRAE president, said. "Each year the challenge grows as technology becomes more efficient. That we continue to build upon the savings speaks to the ability of our industry to adapt and transform as those technologies change and more advanced technologies become more cost effective."

"The Illuminating Engineering Society has actively engaged with ASHRAE since 1975 providing technical support and co-developing standards," Mark Lien, IES Industry Relations Manager and liaison to the Standard 90.1 committee, said. "Compliance with recommended light levels is verified using a database of luminaires. These baseline products were reevaluated and updated to reflect the market shift toward higher efficiency lighting sources. We are proud of the dedicated members of the Lighting Subcommittee and the Standard 90.1 committee and their significant contribution to the energy savings achieved by the 2016 version."

On a nationally aggregated level, building-type energy savings range from 11.9 percent (fast food restaurants) to 48.6 percent (schools) and energy-cost savings from 15.3 percent (large offices) to 49.8 percent (schools). These figures include energy use and cost from the whole building energy consumptions including plug and process loads.

Sixteen different building prototypes were modeled in 17 different climate locations for a total of 272 building types in various climate zones that were incorporated into this analysis.

The energy reduction calculation was achieved through more than 120 addenda incorporated in the standard related to changes to requirements. The major changes in those addenda:

- updated controls for emergency lighting
- improved window U-factor and solar heat gain coefficient
- improved coiling door air leakage requirements
- updated parking lot occupancy controls
- updated opaque door U-factor
- established minimum chilled water systems coil selection Delta T
- updated transformer efficiency requirements
- added domestic hot water branch insulation
- reduced heat rejection variable frequency drive (VFD) threshold
- raised minimum exhaust air energy recovery threshold
- reduced exterior and interior lighting allowances
- updated fenestration orientation
- included service factor in heat rejection VFD threshold
- updated motor efficiencies
- improved hotel/motel guest room control
- reduced pumping VFD threshold
- required high efficiency dwelling unit lighting
- reduced retail lighting adder
- eliminated computer room economizer threshold
- removed ventilation optimization exception for energy recovery ventilator
- updated transfer air requirements
- updated climate zones

ASHRAE, founded in 1894, is a global society advancing human well-being through sustainable technology for the built environment. The Society and its more than 57,000 members worldwide focus on building systems, energy efficiency, indoor air quality, refrigeration and sustainability. Through research, standards writing, publishing, certification and continuing education, ASHRAE shapes tomorrow's built environment today. More information can be found at [www.ashrae.org/news](http://www.ashrae.org/news).

IES is the oldest and largest educational and scientific society in North America devoted to lighting. Since 1906, the IES has sought to improve the lighted environment by bringing together those with lighting knowledge and by translating that knowledge into actions that benefit the public. A broad variety of programs, including publications, conferences and seminars, have been established to accomplish this mission. IES publishes and distributes authoritative lighting literature authored by committees with the most experienced minds in industry and academia today. For more information about IES, go to <http://www.ies.org/>.