

ASHRAE BLUEPRINT

November 2012

President
Bob Everson

President Elect
Rob Marshall

Vice President
Michael Thompson

Secretary
Ryan O'Connor

Treasurer
John Schwartz

1st Board Member
Stuart Oster

2nd Board Member
Paul Hanisch

3rd Board Member
Michael Heeney

Membership
Keith Luke

YEA
Keith Luke

Student Activities
Aaron Kompelien

CTTC
Ryan O'Connor

Historian
Kacie Schneider

Honors & Awards
Greg Hintgen/Rob Marshall

Research Promotion
Stuart Oster

Newsletter
Ryan Van Der Bill

Publicity
Ken Wickre

Special Events
Isaac Anderson

Reception
Blake Lynch

PAOE Watch Dog
Greg Hintgen

Government Affairs
Open

Refrigeration Committee
Open

Webmaster
Ryan Jervik



PRESIDENT'S MESSAGE Bob Everson

Chapter Meeting: Wednesday, November 7th, 2012 @ Westward Ho Social 11:30 AM, Lunch Served at 11:45 AM, Program 12-1:00 PM

RSVP at the link below no later than Friday, November 2nd.

<http://www.surveymonkey.com/s/DPT9BW5>

Please use SurveyMonkey via this link to give us a count on the meals for the meeting.

It is hard to believe we are already moving into the holiday season this year. This will be a noon meeting this month, please help us work to keep our excellent PAOE record by attending meetings so we get added points for keeping our attendance up, plus you get to hear a very good program!

November and December will be the only months for noon meetings this year.

As a reminder, if any members have information to place on our website, please contact Ryan Jervik, our Chapter Webmaster, to place on the site. Keep in mind you can visit us on our Facebook page.

Our program will be on Geothermal, presented by Dr. Chuck Remund. Chuck is a well known authority on geothermal, so it should be informative. Please show your support by attending Wednesday at noon.

The BOG will meet prior to the general meeting.

See you at the "Ho".

ASHRAE BLUEPRINT

CTTC
Ryan O'Connor

This month we are pleased to welcome Charles Remund, to speak about the importance of Grout Thermal Conductivity as it relates to Geothermal Systems. Please see his biography information below.

Bio – Dr. Charles Remund

Dr. Remund received his undergraduate and masters degrees in Agricultural Engineering from South Dakota State University, and his Ph.D. in Engineering from the University of Nebraska in 1988. He was on the Mechanical Engineering faculty at South Dakota State University from 1988 to 2009, where he taught thermodynamics, heat transfer, fluid dynamics, design of thermal systems and applied laboratory courses. While at SDSU Dr. Remund was principle investigator on many research projects associated with ground source heat pumps, specifically addressing heat transfer characteristics of grouting materials, soil and rock. He also worked with regional electric utilities and the Geothermal Heat Pump Consortium through the Northern Geothermal Support Center, through which many were trained in various aspects of ground source heat pump design and installation. Since 2009, Dr. Remund has been involved entirely in the private sector, where efforts to promote ground source heat pumps through design assistance and training (Geo-Connections, Inc.), soil and rock formation thermal conductivity testing (GRTI), and the sale and technical support of thermally-enhanced grouting materials (GeoPro, Inc.).

The 2012-2013 South Dakota Chapter ASHRAE Line-up:

Sept 13	Evening	Thomas Lawrence – The Basics of High Performance Building Design <i>ASHRAE Distinguished Lecturer</i>
Oct 3	Evening (Student Night)	Matt Pemberton, SEMCO <i>Humidity Control in Chilled Beam Design</i>
Nov 7	Noon	Charles Remund. <i>Importance of Grout TC for Geothermal</i>
Dec 5	Noon	T.B.D.
Jan 2	Evening	T.B.D.
Feb	Valentine	
Mar 6	Evening	
April 3	Evening (student night)	T.B.D.
May	Fishing	
June	Golf	

ASHRAE BLUEPRINT

Membership Keith Luke

If you know of anyone that may be interested in joining ASHRAE, be sure to tell them about ASHRAE and invite them to a meeting. Membership information can be found at www.ashrae.org/members/ or call Keith at 605-996-7548 with questions.

History Kacie Schneider

SANDFORT HELD THE REINS OF THE SOUTH DAKOTA CHAPTER 40 YEARS AGO

John F. Sandfort Charter Member and Second President (1962-63) of the South Dakota ASHRAE Chapter

John F. Sandfort was born at Humboldt, Nebraska on July 18, 1911. His family eventually moved to Ohio and his early schooling was in the Columbus, Ohio public schools. According to John, he was inspired to pursue a career in the newlyemerging fields of refrigeration and air-conditioning by his father, who was Chief Engineer for the Fairmont Creamery Co .

John earned Bachelor's degrees in Mechanical Engineering and Industrial Engineering from the Ohio State University in 1933 and 1934, respectively. Upon completing his studies, he joined the design and development department of the Frigidaire Division of General Motors as a systems design engineer. John was employed at Frigidaire from 1934 to 1938 and remembers that the focus of the design and development department's efforts during that time was to exploit the application of mechanical refrigeration to the emerging field of comfort air conditioning.

From 1938 to 1939 John was employed in the Architect's Office at the Ohio State University. In 1939 he joined the faculty of the Mechanical Engineering Department at Iowa State University. John left Iowa State in 1942 to join the U.S. Army as a field artillery officer, serving throughout World War H. He returned to the faculty at Iowa State University in 1946, earning a Master of Science degree in mechanical engineering in 1948. John distinguished himself as an educator and scholar, advancing through the ranks from Assistant Professor to Full Professor.

In 1958 John accepted the position of Head of Mechanical Engineering at South Dakota State University. He and his wife Lela and twin sons moved to Brookings, South Dakota. John skillfully guided the department through 19 years of development and growth, retiring from the position on June 31,1977.

During his long and successful career, John was active in consulting, research and publishing. He was a licensed professional engineer in South Dakota and Iowa. He spent time working with the C.A. Dunham Co. of Chicago, the Corps of Engineers Research and Development Labs at Ft. Belvoir, VA, and the Q.M. Research and Development Labs at Natick, MA. He authored the textbook "Heat Engines", published several articles in the ASHRAE Journal, contributed to the ASHRAE Guide and Data Books and served as chair of ASHRAE's Research and Technical Committee.

ASHRAE BLUEPRINT

John's long association with ASHRAE began in 1938 when he joined its predecessor, the American Society of Heating and Ventilating Engineers (ASHVE). In addition to his contributions at the Society's national level, John is a past president of both the Iowa and South Dakota Chapters. He was elected to the grade of Fellow of ASHRAE in 1971. He received the Society's E.K. Campbell Award of Merit in 1976 and was honored as a Distinguished 50-year Member at the Society's winter meeting in 1988.

John was a leading member of the group that spearheaded the formation and chartering of the South Dakota Chapter in 1961. He served as its second president in 1962-63. John encouraged student participation in ASHRAE and inspired several budding young engineers to pursue careers in HVAC. His advice to young people entering the HVAC field: "Continue to grow professionally through the study of, and contribution to, professional journals."

John and Lela Sandfort currently reside at Bella Vista, Arkansas. He has been active in retirement, including part-time consulting work, two terms as president of the Bella Vista Townhouse Association, and a term as president of the Arkansas Council of The Retired Officers Association (TROA). He holds the military rank of Lt. Col. -U.S. (ret.).

Reprinted with permission from June, 2003. Author K. Bassett.

**From ASHRAE HQ:
Jodi Scott**

For Release:
Oct. 17, 2012

Contact: Amanda Dean
Public Relations
678-539-1216
adean@ashrae.org

ASHRAE, AHR Expo Return to Dallas, Texas for 2013 Winter Conference

ATLANTA—Deep in the heart of Texas, where the stars at night are big and bright, ASHRAE is convening for its 2013 Winter Conference to corral energy use and blaze the way in high performing building design.

The 2013 Winter Conference takes place Jan. 26-30 at the Sheraton Dallas. To register and for complete Conference information, visit www.ashrae.org/dallas.

The International Air-Conditioning, Heating, Refrigerating Expo®, held in conjunction with the Winter Conference, will run Jan. 28-30. The Expo, www.ahrexpo.com, is held at the Dallas Convention Center.

In keeping with ASHRAE's goal of continuing education the Conference offers some 200 Professional Development Hours, as well as Continuing Education Units, which can be applied toward a professional engineering license.

ASHRAE BLUEPRINT

The technical program features more than 200 sessions addressing energy conservation; facility management; operations, technology and energy improvements; large building design; standards, guidelines and codes; HVAC&R systems and equipment; HVAC&R fundamentals and applications; and refrigeration. One particular track of note is Industrial and Transportation Ventilation, focusing on the industrial and manufacturing sector prevalent in Texas. The full Technical Program offers the opportunity to earn a year's worth of PDHs, NY PDHs, AIA LUs and LEED AP credits and runs Jan. 27-30.

Five Professional Development Seminars and 15 Short Courses are offered to help industry professionals stay current on HVAC technology, including how to apply the newest ASHRAE standards. The ASHRAE Learning Institute (ALI) is offering five new half-day short courses on everything from the basics of laboratory design to techniques for optimizing HVAC systems and components. The full-day professional development seminars focus on the commissioning process; data center energy efficiency; healthcare facilities; complying with Standard 90.1-2010 and energy modeling best practices. ALI courses are approved for renewal of professional engineer and professional architect licenses, as well as for industry certification programs.

www.ashrae.org/Dallascourses.

The Conference's Plenary will feature former Pittsburgh Steelers quarterback Rocky Bleier. Despite being wounded in both legs during the Vietnam War, he embarked on a two-year road to recovery, and eventually pressed on to become one of the Steelers' top leading ground-gainers, passing the 1,000-yard rushing mark in one season, and contributing to four Super Bowl victories. Bleier's speech, "Be the Best You Can Be," motivates audiences to keep on striving for greater accomplishments. He shares his remarkable story during the Plenary, 3:15 p.m., Saturday, Jan. 26.

Additionally, ASHRAE offers a special administration of all six certification examinations on Wednesday Jan. 30: Building Energy Assessment Professional (BEAP), Building Energy Modeling Professional (BEMP), Commissioning Process Management Professional (CPMP), High-Performance Building Design Professional (HBDP), Healthcare Facility Design Professional (HFDP) and Operations & Performance Management Professional (OPMP). ASHRAE's certification program recognizes industry professionals who have mastered knowledge and skills reflecting best practices in certain aspects of building design and operations. More information on each certification can be found at www.ashrae.org/certification.

ASHRAE Conference technical tours give you a first-hand look at technology developed by members to further the industry. Tours include the Southern Methodist University, the Baylor Charles A. Sammons Cancer Center and Cowboys Stadium.

ASHRAE, founded in 1894, is a building technology society with more than 50,000 members worldwide. The Society and its members focus on building systems, energy efficiency, indoor air quality, refrigeration and sustainability within the industry. Through research, standards writing, publishing and continuing education, ASHRAE shapes tomorrow's built environment today.



Applications Now Being Accepted for HVAC Design Scholarship

The ASHRAE Learning Institute is hosting a three-day HVAC Design Essentials Training that allows attendees to gain the fundamentals and technical aspects to design, install and maintain HVAC systems. The workshop will be held January 14 – 16, 2013 at ASHRAE Headquarters in Atlanta.

To encourage attendance by young professional ASHRAE members, the YEA Institute offers one full scholarship for attendance to the HVAC Design Level I Training: Essentials. The full cost of registration to Level I of this workshop will be covered by ASHRAE.

Criteria: All applicants must be ASHRAE members and 35 years of age or younger as of January 31, 2013 (*student members are not eligible*). Applicants will be reviewed based on contribution to the industry, ASHRAE involvement and career goals.

Deadline: All applications must be received by the close of business on Monday, November 12, 2012. Please complete the online application [here](#) and submit to Rhiannon Loomis at Rloomis@ashrae.org or mail to Rhiannon Loomis, 1791 Tullie Circle, Atlanta, GA 30329.



ASHRAE Webcast to Focus on Building Energy Performance

ASHRAE's upcoming webcast, titled **Assessing Building Energy Performance: From Principles to Practice**, will broadcast live on **April 18, 2013, from 1:00 – 4:00 pm EDT**. This **FREE** webcast is brought to you by the Chapter Technology Transfer Committee.

“This webcast will focus on the importance of building energy performance and its far reaching implications in both new and existing buildings,” said Andy Cochrane, Chair of the CTTC Webcast Ad Hoc Committee. “This program will help participants to recognize the opportunities that Assessing Building Energy Performance (ABEP) presents. From recognizing the different approaches, team skills, and knowledge needed to properly assess building energy performance, to the application of ASHRAE building audit levels, this webcast will provide viewers with an understanding of ABEP principles and practical application knowledge.”



The webcast presenters are: Christopher Mathis, President, MC Squared, Asheville, NC, Drury Crawley, Ph.D, Director of Building Performance, Bentley Systems, Washington, DC and Jim Kelsey, LEED AP, PE, BEAP, Principal, kW Engineering, Oakland, CA.

Online registration for the webcast will begin on March 18, 2013. For more information on the webcast program, sponsorship opportunities, continuing education credits, and ASHRAE resources related to assessing building energy performance, visit www.ashrae.org/ABEPwebcast. If you have questions about the webcast, call 678-539-1200 or email ashrae-webcast@ashrae.org.



Distinguished Lecturer Program Enhances Chapter Meetings

By Farooq Mehboob – Fellow

2012-13 Chapter Technology Transfer Committee Vice Chair

Most Chapter Programs are technical in nature and are greatly valued by our members. The Chapter Technology Transfer Committee (CTTC) (www.ashrae.org/cttc) is working to increase member interest and enhance ASHRAE's outreach to allied professions and Societies with more broad-based programs.

CTTC has identified thirteen Distinguished Lecturer's (DL's) who provide twenty-nine presentations highlighting Leadership, Communication, Decision Making, Negotiating, Problem solving, Planning, Ethics, and Project Management.

The list of DL's who present non-technical presentations is available at www.ashrae.org/distinguishedlecturers. Four ASHRAE Presidential Members are among the thirteen DL's who present twenty-nine non-technical topics.

Chapter programs on non-technical subjects provide an excellent opportunity to arrange joint meetings between ASHRAE Chapters and other allied professional Societies. Joint meetings improve ASHRAE's outreach to allied professions while providing excellent networking opportunities for ASHRAE members.

The ASHRAE DL Programs began in Society Year 1996-97. It is administered by CTTC and provides internationally recognized lecturers to local chapters, regions, student branches, and other organizations.

For a complete listing of Distinguished Lecturers and detailed procedures to arrange a presentation, visit www.ashrae.org/distinguishedlecturers. For additional information, contact Tammy Catchings at tcatchings@ashrae.org or 678-539-1123.

Chapter Programs Offer Support for Meetings

The Chapter Technology Transfer Committee (CTTC) aims to develop and maintain high quality and readily available tools to enable ASHRAE Chapters to offer timely and informative industry-related programs to all segments within the HVAC&R industry.

Check out the "Program Resources" Quick Link at <http://www.ashrae.org/cttc> and find great ideas like these: an IAQ Guide Speaker List, an If a Speaker Cancels....guide, an Attendance/PDH Certificate template, an ASHRAE Chapter Program Survey template, and even an Energy Star presentation, just to name a few.



This is the time to finalize plans for your chapter programs calendar for the entire ASHRAE year. Remember, great Chapter Programs empower your chapter, and all of ASHRAE for that matter, to carry out ASHRAE's mission and vision! Contact your CTTC Regional Vice-Chair for more information and additional resources.



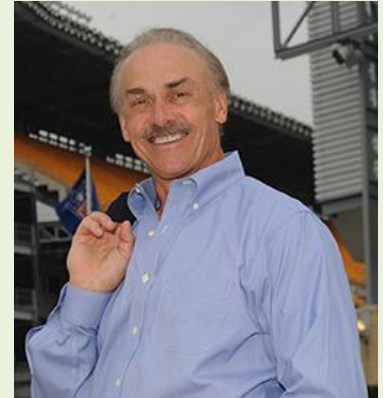
Register For the ASHRAE Winter Conference!

Plenary Speaker Tells Story of Perseverance

Have you registered for ASHRAE's 2013 Winter Conference, Jan. 26-30 in Dallas, Texas? **Register by Nov. 4 and save!**

From its strong technical program to the first-hand experiences offered by its technical tours, the ASHRAE Winter Conference gives attendees opportunities for examining and discussing the latest technology. And don't miss Plenary Session keynote speaker Rocky Bleier.

Bleier had just been drafted for the Pittsburgh Steelers in 1968 when he received a different kind of draft: combat duty for Vietnam. Though he was wounded in both legs while fighting overseas, Bleier embarked on a two-year road to recovery, and eventually pressed on to become one of the Steelers' top leading ground-gainers, passing the 1,000-yard rushing mark in one season and contributing to four Super Bowl victories. His speech, "Be the Best You Can Be," motivates audiences to keep on striving for greater accomplishments.



Bleier shares his remarkable story during the Plenary Session, Saturday, Jan. 26. For more information, visit <http://www.ashrae.org/dallas>.

Specialty Conference Brings Important Topic to Attendees

The principal objective of the Seventh International Cold Climate HVAC Conference, Nov. 12-14, 2012 Calgary, Alberta, Canada, is to provide key elements of a strategy by which scientists, designers, engineers, manufacturers and other decision makers in cold climate regions can achieve good indoor environmental quality (IEQ), with a minimum use of resources and energy.

Some 60 peer-reviewed papers presented by diverse, international authors showcase world-wide perspectives and practices in cold climate design. The Scandinavian Federation of Heating, Ventilation and Sanitary Engineering Associations (Scanvac) and the Federation of European Heating and Air-Conditioning Associations (REHVA) are conference co-sponsors. To register, visit www.ashrae.org/ColdClimate

Young Engineers in ASHRAE (YEA) Hosts Hospitality Suite in Dallas

Attention young professional members age 35 and younger! You are invited to visit the YEA Hospitality Suite on Sunday, Jan. 27, from 4–7 p.m. The suite offers social and networking opportunities and light refreshments are served





New Faces of Engineering: College Edition

Encourage a Student to Apply for Scholarship and Recognition

The program recognizes outstanding junior or senior (defined as third, fourth or fifth year) ASHRAE student members enrolled in a Bachelor of Science in Engineering program from an ABET Accredited school who are proving themselves to be leaders in the field of engineering. The winner will receive a \$1000 **scholarship** and have their profile featured on the New Faces of Engineering: College Edition's Facebook page.

Applicants must “like” the New Faces of Engineering: College Edition Facebook page in order to apply.

To apply to be ASHRAE's New Face of Engineering: College Edition, you must:

- be an ASHRAE member
- be a junior or senior (defined as third, fourth or fifth year) engineering student as of Sept. 1, 2011
- be enrolled in a Bachelor of Science in Engineering program from an ABET Accredited school
- answer four short questions about your experience as an engineering student
- submit one professional-quality head and shoulders photo of yourself in business attire. Photos must be high resolution (300 dpi) to ensure the file size is near 1 MB.

ASHRAE's student New Face of Engineering would demonstrate academic excellence, with a GPA of 3.0 or higher, hold leadership positions within university student organizations, have outstanding communication skills, have a record of some non-engineering related community service and have a proven track record of involvement in the engineering industry. The New Face of Engineering will receive a \$1000 scholarship from ASHRAE. More information can be found [here](#).

Grants Promote the Industry and Gain Recognition For Students

The HVAC&R industry is constantly making strides to improve the technology that makes everyday living possible and better. ASHRAE relies on the research and efforts of young engineers and architects to make advances in the field that will make a difference for future generations.

The ASHRAE Senior Undergraduate Grant Program offers students at schools all over the world an opportunity to work on projects that increase their knowledge of the industry. With support and assistance from university faculty, senior undergraduates can work on an ASHRAE-related topic with funding from ASHRAE up to \$5,000 per project.

Applications for the grant must include details about the project and are to be submitted online by faculty in order to be considered. Projects involving the building of working models, testing equipment, experimental teaching aids, and laboratory experiments are encouraged. Grants may cover projects lasting from one academic term up to one year.

The deadline for application submissions is December 17, 2012. Applicants will receive notification of their application status by February 18, 2013. The highest ranking team will be awarded a trip to the 2014 Winter Conference to present their project at the student program. For complete information on the ASHRAE Senior Undergraduate Grant Program, go [here](#).



ASHRAE Learning Institute

Seminars & Courses at ASHRAE's Winter Conference and AHR Expo in Dallas, TX

2 WAYS TO REGISTER

Internet: www.ashrae.org/dallascourses

Phone: Call 1-800-527-4723 (US and Canada) or 404-636-8400 (worldwide)

Full-Day Professional Development Seminars

\$485/\$395 ASHRAE Member – Earn 6 PDHs/AIA LUs or .6 CEUs

The Commissioning Process in New & Existing Buildings
Saturday, Jan 26 – 8:00 a.m. to 3:00 p.m.

Complying with Standard 90.1-2010
Tuesday, Jan 29 – 9:00 a.m. to 4:00 p.m.

Data Center Energy Efficiency
Saturday, Jan 26 – 8:00 a.m. to 3:00 p.m.

**Energy Modeling Best Practices and Applications:
HVAC/Thermal**
Tuesday, Jan 29 – 9:00 a.m. to 4:00 p.m.

Healthcare Facilities: Best Practice Design & Applications
Saturday, Jan 26 – 8:00 a.m. to 3:00 p.m.

Half-Day Short Courses

\$159/\$119 ASHRAE Member – Earn 3 PDHs/AIA LUs or .3 CEUs

Air-to-Air Energy Recovery Fundamentals
Sunday, Jan 27 – 2:00 p.m. to 5:00 p.m.

Commissioning Process & Guideline 0
Monday, Jan 28 – 2:45 p.m. to 5:45 p.m.

**Humidity Control: Applications, Control Levels
and Mold Avoidance**
Sunday, Jan 27 – 2:00 p.m. to 5:00 p.m.

Evaluating the Performance of LEED®-Certified Buildings
Monday, Jan 28 – 2:45 p.m. to 5:45 p.m.

Air-to-Air Energy Recovery Applications: Best Practices
Monday, Jan 28 – 8:30 a.m. to 11:30 a.m.

**Optimization of HVAC Systems & Components:
Techniques & Real-World Examples**
Tuesday, Jan 29 – 9:00 a.m. to 12:00 p.m.

**Application of Standard 62.1-2010:
Multiple Spaces Equations & Spreadsheet**
Monday, Jan 28 – 8:30 a.m. to 11:30 a.m.

Energy Management in New and Existing Buildings
Tuesday, Jan 29 – 9:00 a.m. to 12:00 p.m.

Combined Heat & Power: Design through Operations
Monday, Jan 28 – 8:30 a.m. to 11:30 a.m.

Avoiding IAQ Problems
Tuesday, Jan 29 – 9:00 a.m. to 12:00 p.m.

**Understanding Standard 189.1-2011 for
High-Performance Green Buildings**
Monday, Jan 28 – 2:45 p.m. to 5:45 p.m.

Designing Toward Net Zero Energy Commercial Buildings
Tuesday, Jan 29 – 1:00 p.m. to 4:00 p.m.

**Introduction to Ultraviolet Germicidal
Irradiation (UVGI) Systems**
Monday, Jan 28 – 2:45 p.m. to 5:45 p.m.

Understanding & Designing Dedicated Outdoor Air Systems
Tuesday, Jan 29 – 1:00 p.m. to 4:00 p.m.

Laboratory Design: The Basics and Beyond
Tuesday, Jan 29 – 1:00 p.m. to 4:00 p.m.

HVAC Design Training

Jan 14-18, 2013 • Jan 30-Feb 1, 2013 (Level I only) • Mar 18-22, 2013 • Jun 3-7, 2013 • Aug 12-16, 2013

HVAC Design: Level I - Essentials

Gain practical skills and knowledge in designing, installing and maintaining HVAC systems that can be put to immediate use. The training provides real-world examples of HVAC systems, including calculations of heating and cooling loads, ventilation and diffuser selection using the newly renovated ASHRAE Headquarters building as a living lab.

HVAC Design: Level II - Applications

Developed by industry-leading professionals, the workshop provides participants with advanced level information about designing, installing and maintaining HVAC systems that can be put to immediate use. Participants will gain an in-depth look into Standards 55, 62.1, 90.1, and 189.1 and the Advanced Energy Design Guides, as well as a range of other HVAC topics including: HVAC equipment and systems; energy modeling; designing mechanical spaces; designing a chiller plant; and BAS controls.

Visit www.ashrae.org/hvacdesign to register