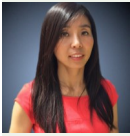


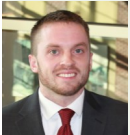
2015-2016 Officers



*Stacie Suh
President*



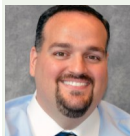
*William Tang
President-Elect*



*Mike Gilroy
Vice President*



*Dan Carington
Secretary*



*Bill Garvey
Treasurer*

Table of Contents

Monthly Meeting	1
President's Message	2
Editor's Note	2
March Meeting Info	3
February Meeting Recap	4
PAOE Points	5
Membership Promotion	6-8
Globalcon 2016	9
Webmaster's Notes	10
GGAC	11
BOG Meeting Minutes	13
CTTC	14
YEA	15
Upcoming Events	15
Save the Date	16
Product Show	17-18
Research Promotion	18
Student Activities	19
Society News	20
ASHRAE Learning Institute	21
Meeting Schedule	22
Officer & Committee List	23
ASHRAE Research	
Contributor Listing	24

March Meeting

Tuesday, March 8, 2016

Main Meeting:

**Case Histories of Both
Productive and Problematic
Interactions Between
Architectural Designs and HVAC**

Tech Session:

GroundSource Case Study

Joint Meeting with AEE

Refer to Page 3 for more information

Special thanks to our Sponsors:

Gold:

- RDK Engineers
- J.S Flemings Associates

Silver:

- Daikin
- Filter Sales & Service, Inc.
- RG Vanderweil Engineers
- RST Thermal
- R. T. Forbes Company
- Stebbins-Duffy, Inc.
- Victaulic
- Equipment Direct Sales, Inc.

Meeting Manager:

Mark Leonard
MCL@brplusa.com

Where:

Metro Meeting Centers
101 Federal St.
4th Floor
Boston, MA

Cocktail Sponsor:

Equipment Direct Sales

Meal:

- Baked Lasagna
- Traditional Marinara & Ground Beef
- Creamy White Sauce & Vegetables (V)
- Salad (V)
- Garlic Bread
- Pudding Cups

Time:

- 5:15 - 6:00 Technical Session (Room TBD)
- 5:30 - 6:45 Social/Registration/Dinner (in dining room & common area)
- 6:45 - 8:00 Dessert, Announcements & Main Program (in Lexington/Concord Meeting Room)

Cost:

- ASHRAE Boston Members: \$50
- Non -Members / Walk-Ins: \$60
- ASHRAE Student Members with RSVP: Free

Parking:

Garage At Post Office Square, Zero Post Office Square, Boston, MA (\$9 after 4:00 pm)

Please register online at www.ashraeboston.org. RSVP by 12:00 PM on

Friday, March 4, 2016

If you have any questions, you may contact Erin Popa, Attendance Chair, at ashraebostonattendance@outlook.com.

Thank You



PRESIDENT'S MESSAGE

By: Stacie Suh

Boston Members, we need your support. Please follow us on twitter (twitter.com/ASHRAEboston), linkedin (www.linkedin.com/grps/Boston-ASHRAE-Chapter-5053857/about?) and Facebook (<https://www.facebook.com/bostonashraeyea>). In addition, our new website is up and running. Please check out www.ashraeboston.org. Kevin Doty has been working very hard to get the new website going.

ASHRAE Boston Chapter had its February meeting at Metro Meeting Center located in 101 Federal St Boston. We were very pleased to let you know that the meeting was a success. It was Membership, YEA and Research Promotion night. We had four past presidents join us at the meeting and the BOG meeting, which was held prior to main meeting.

We need your support to get your feedback concerning the main meeting and technical session. Mike Gilroy, CTTC chair, sends out a survey via Survey Monkey to all attendees right after the meeting. We appreciate your feedback! Any questions, please contact Mike Gilroy at Mgilroy@brplusa.com

For members who couldn't make it to the meeting and want to know more about the February meeting, please refer to meeting recap section written by Andrew Krenning for details on the February meeting.

I would like to first thank Steven Friedman (Memorial Sloan Kettering Cancer Center, NY) for a great presentation on *Infrastructure Resiliency Design in Healthcare- Post Superstorm Sandy*. Steven was very entertaining and engaged the audience to participate during the presentation. The presentation had many great photos during the Superstorm Sandy in NYC. Thank you Christine Reinders for a brief presentation on YEA; Dan Carrington/Bob Persechini on membership and Dan Diorio who spoke on Research Promotion. Please reach out to Christine at creinders@cannondesign.com if you are interested in being involved with YEA.

Secondly, I would like to thank technical session speaker Brad Selmon (M.A Selmon Company) for a great presentation on *Power and Energy Metering*. I would like to also thank all attendees at the February meeting. Special thanks to behind the

scenes crew Mark Leonard, Erin Popa, Bill Garvey, Kevin Doty and Steve Bosland.

Next month's meeting will be held on March 8th (Tuesday) at 101 Federal St in Boston, MA. Please join us in welcoming main meeting speaker Lew Harriman (Director of Research at Mason-Grant Consulting in Portsmouth NH). The meeting is on *Real World Integrated Design- Case Histories of Productive and Problematic Interaction between Architectural Designs and HVAC Systems*.


Hope to see you all at the March meeting! The March meeting is the last meeting for the year. I encourage all members to bring along non-members to this event. We need your support to keep the Boston Chapter growing and to share the good news with our local community.

ASHRAE Boston chapter has made available corporate sponsorship opportunities. Please contact Will Tang at wtang@brplusa.com for more information. We look forward to your sponsorship, which will support the Boston chapter greatly. A huge "Thank you" goes out to Daikin, RDK Engineers, RenewAire, RG Vanderweil, Stebbins Duffy, Filter Sales & Service, Inc, R.T.Forbes Company, J.S. Fleming Associates, Equipment Direct Sales and Victaulic who are already part of the sponsorship program and supporting the Boston Chapter.

The ASHRAE Boston Chapter will be hosting a product show in April 2016. Please sign up with Jeff Schultz. For more information go to www.ashraeboston.org.

I look forward to meeting all of you throughout the year. I would love to hear from you with any thoughts you might have regarding the ASHRAE Boston Chapter. You can email me at stacie@stebbinsduffy.com

Thank you

Stacie Suh 



EDITOR'S NOTE

By: Deanna Adkison

Materials for the April newsletter are due by **March 18, 2016**.

Please submit employment/want ads in .pdf, .doc or .jpg format. A company logo may also be included. Feel free to send any ideas you would like to share or include in next month's issue.

For additional information, refer to our website at www.ashraeboston.org.

For more information, please e-mail northeastaire@gmail.com

Tech Session: GroundSource Case Study

Description of Presentation:

The seminar will be given by a professional HVAC engineer who is experienced in engineering geothermal HVAC systems for buildings in the New England area. It will offer a basic level, but systematic knowledge in geothermal HVAC systems, their applications, the design and construction process in New England area.



Speaker Bio: *George Hu*

George Hu is the founder and president of Air Water Energy Engineers, Inc. (AWE), a company focuses on engineering sustainable building systems. He has over 18 years of experience in the field of HVAC systems engineering and analysis, including Geothermal HVAC systems. Before founding AWE in 2007, George worked as an HVAC project engineer and then an associate at Bard, Rao + Athanas Consulting Engineers, a project manager and associate at AHA Consulting Engineers. George is a professional engineer licensed in Connecticut, Massachusetts, New Hampshire, Rhode Island, Vermont, Maine, Pennsylvania, and New York State. He is a member of the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE), and a LEED accredited professional by the U.S. Green Building Council (USGBC). He is also a Certified GeoExchange Designer (CGD) by the Association of Energy Engineers and International Ground Source Heat Pump Association (AEE / IGSHPA). George holds a Master's degree of Science in Building Technology from Massachusetts Institute of Technology. He also had a Master's degree of Mechanical Engineering, specializing in Computational Fluid Dynamics (CFD), from the University of Delaware. George obtained his Bachelor's degree of Engineering from Beijing University of Aeronautics and Astronautics.

MAIN MEETING:

Title of presentation: Real-World Integrated Design - Case Histories of Both Productive and Problematic Interactions Between Architectural Designs and HVAC Systems

Description of presentation:

Integrated design offers the potential for reductions in energy, as well as comfort improvements and cost reductions. But to achieve these benefits while avoiding problems, it's important to understand the constant real-world interaction between the building's enclosure and its HVAC systems.



Speaker Bio:

Lew Harriman (distinguished lecturer)

Lew Harriman is Director of Research at Mason-Grant Consulting in Portsmouth, NH. He has 40 years of experience researching and solving problems related to energy, humidity and moisture in buildings and industrial processes. In recognition of his accomplishments, in 2010 Lew was elected a Fellow of ASHRAE and in 2012 he received an appointment as an ASHRAE Distinguished Lecturer.

Lew received his degree in Visual studies/Architecture from Dartmouth. He served five years in the U.S. Air Force as a Captain in the Engineering & Services Division of the Headquarters, Strategic Air Command, and ten years working as application engineer for an international manufacturer of dehumidification equipment. Since 1986, Lew has been a building science consultant, building forensic investigator, researcher, lecturer and author. He has lectured on the topics of humidity control design and trouble shooting, ventilation system design, building moisture management, infrared analysis of building systems, mold prevention and building energy retrofits for architects, engineers, contractors and building operators throughout North America, Europe and Asia.



February Meeting Recap

By: Andrew Krenning

The first chapter meeting of 2016 at the Metro Meeting Center started with a networking and social hour.



The meeting portion of the evening was kicked off by ASHRAE Boston President Stacie Suh who welcomed everyone to Membership Promotion, Young Engineers and Research Promotion night. She started with introducing Dan Carington who gave an update on Membership of the



Boston ASHRAE chapter. The YEA Chairperson, Christine Reinders, gave an update and brief overview of YEA for the Boston Chapter and the national program. She talked about the importance of getting new and young Engineers involved and how YEA can help members get involved with participating at a local and national level. The Research Promotion Chairperson, Dan Diorio, gave an update and talked about the meaning of the program and how important it is to the ASHRAE organization.

The main meeting presentation was given by Steven Friedman who is the Director, Facilities Engineering Design and Construction for Memorial Sloan Kettering Cancer Center in New York, NY. The presentation was on Infrastructure Resiliency in Healthcare facilities and how the world's oldest and largest private cancer treatment center dealt with these issues after Super Storm Sandy and how they are preparing for the future. Mr. Friedman started by giving everyone background on the facility and its

location within the area that was hit the worst during the storm and subsequent flood waters. He continued with showing the aftermath and damage that occurred to the building's main infrastructure and how that affected the



Center's ability to serve its customers and its overall financial impact. With the lessons learned during the storm, Sloan Kettering's standards moving forward are to incorporate flood prevention procedures and storm mitigation design strategies with regular Healthcare Facility MEP design criteria, requirements and standards. This includes adding flood protection at the property line, elevating all critical building infrastructures above the DFE and incorporating structural strategies that mitigate the risks associated with water infiltration through the building structure and walls. They have been able to study the cost associated with these additional measures in the new building and it would easily pay for itself if another similar storm were to affect the area.

Look forward to seeing everyone at the March meeting, which will be held at the Metro Meeting Center in Boston.



Don't forget to follow us on twitter @ASHRAEboston and on LinkedIn for all the latest news and event updates.

FREE SUNDAY RIVER & SUGARLOAF DISCOUNT SKI VOUCHERS, SAVE \$19 PER ADULT TICKET

The Boston Chapter is participating in the Sunday River/Sugarloaf corporate voucher program again this year. Each voucher entitles you to purchase up to four discounted lift tickets [\$70 Adults, \$58 Teen, \$48 Junior/Senior] at either ski resort by presenting an ASHRAE membership card, picture ID, and voucher. The regular prices are \$89/\$69/\$59. Contact Ed Waldman, ewaldman1@verizon.net, if you would like any vouchers. The voucher is a PDF that can be e-mailed to you, but the resorts have become stricter about showing your ASHRAE card when you purchase the tickets. There is no charge for the vouchers and there are no blackout dates. Complete rules below:

How To Use Vouchers

1. Bring your corporate voucher to any participating resorts ticket window.
2. Present your voucher, photo ID, and valid ASHRAE membership card to the ticket seller. In the absence of the individual member, immediate family members defined as spouse and children, must present some form of ASHRAE identification, plus a photo ID in order to receive the discount.

Each person expecting the corporate pricing must be present with the corporate voucher holder at the time of ticket purchase. The ticket seller will take the voucher in exchange for up to 4 lift tickets.

Presidential Award of Excellence

Boston Chapter - 2015-2016

Chapter Members	Membership Promotion Points	Student Activities Points	Research Promotion Points	History Points	Chapter Organization Points	Chapter Technology Transfer Points	Grassroots Government Affairs Points	Chapter PAOE Point Totals
1040	610	810	420	50	865	950	75	3780

Employment Ads

ASHRAE Boston Chapter – Employment Ads

The NorthEastAire is published monthly, September through June. It is posted on the Chapter website at www.ashraeboston.org. A link is sent each month to all members of the Chapter, currently over 1000.

Newsletter Rate: \$200 for 1/4 page, \$400 for 1/2 page, \$800 for full page

Website Rate: \$300 per calendar month

Format: Word format, company logos in .jpg or .gif

Deadline for April Newsletter: March 18, 2016

Any questions, please contact Deanna Adkison, Newsletter Editor at 617-535-8236 or northeastaire@gmail.com



MEMBERSHIP PROMOTION

By: Dan Carington

Hello members, hope everyone has been keeping warm these last few weeks. Our March meeting is at Metro Meeting Center in Boston, this will be our 3rd of 3 meetings organized in Boston. Bring in a potential member or members to the meeting and network with everyone. As of February 12, 2016 we are at 1040 members strong. I would like to recognize our latest new Member(s) that have joined us in the last few weeks since the last newsletter went out:

Lui Walkit

Welcome aboard Member(s), wishing you many years of partnership and success with the ASHRAE Boston Chapter. We are so looking forward to seeing everyone at our next Boston Chapter ASHRAE events and meetings.

Recently I was asked what the differences were between the Affiliate Member and an Associate Member, and I responded with the information below. I am also taking this opportunity to go over the other member grades as well.

Affiliate grade is a low cost, introductory membership for those who are either: (1) under 30 years of age OR (2) someone who has been honorably discharged from the Military within the past 5 years.

Dues: Society dues for this 3 year program are:

- \$54 (1st Year)
- \$74 (2nd Year)
- \$95 (3rd Year)

Qualifications:

- Interest in the advancement of the Society's aims, and sufficient qualifications to cooperate with HVAC&R engineers in the advancement of the knowledge relating to HVAC&R engineering and its application.
- For new members only.
- Must be either: (1) under 30 years of age OR (2) honorably discharged from the Military within the past 5 years
- Can only hold this grade for up to 3 cumulative years.

Note: Affiliate Members do not receive a free annual edition of the ASHRAE Handbook

Associate Grade membership is for those who have been in the industry for a few years and are focused on developing skills, and growing their network. Associate grade membership is open to anyone who has an interest in matters of design, operation, or maintenance in HVAC&R-related fields.

Dues: Society dues for Associate Grade are \$202 annually.

Qualifications:

- Experience in technical matters or in design, operation, or maintenance in HVAC&R fields
- Interest in the advancement of the Society's aims, and sufficient qualifications to cooperate with HVAC&R engineers in the advancement of the knowledge relating to HVAC&R engineering and its application.

Member Grade is open to anyone who has a combination of education, professional licensure and work experience equivalent to twelve years in the HVAC&R industry. You will be asked to provide information regarding your education, work, and professional licensure when applying for Member Grade.

Dues: Society dues for Member Grade are \$202 annually.

Qualifications:

The equivalent of 12 Society-approved years of experience composed of an approved combination of:

- Completed education beyond high school;
- Work experience (including research, teaching, design, contracting, engineering sales, or engineering management); and
- Professional engineering or related registration or license issued by a legally authorized body.

Student membership is designed for engineering students who may be considering a career in HVAC&R. Student members are given the opportunity to transfer to Associate grade membership after graduation using the SmartStart program.

Dues: Society dues are \$20 annually

Qualifications:

- Must be studying or have an interest in an HVAC&R industry-related field.
- Matriculated in an approved course of study in the arts and sciences covered by the Society's objectives.

See Benefits Matrix on next page for complete list of benefits.

Please share your experience as a member of the Boston Chapter. Email me and share what ASHRAE has done for you since becoming a member. It is one of my goals to post this in our newsletter to let other members and potential members see the benefit of being a member beyond the books and standards that are at our reach. ASHRAE has been a large part of my career since my involvement and I am sure it has been for you too and can be in the near future.

[Continued on Next Page...](#)

[...Continued from Previous Page](#)

Member Grades and Benefits at a Glance:

Benefit	Member & Associate Grades		Affiliate Grade	Student Grade	
	Regular	*Developing Economy Program		Regular	*Developing Economy Program
Annual Membership Dues	\$202	\$90	\$54 (yr 1) \$74 (yr 2) \$95 (yr 3)	\$20	\$10
Reduced Registration for Society Conferences	Yes	Yes	Yes	Yes	Yes
ASHRAE Handbook	FREE New Members and Associates receive the print volume with CD, plus a one-year complimentary subscription to ASHRAE Handbook Online.	<i>New Members and Associates receive CD, plus a subscription to ASHRAE Handbook Online.</i>	\$33 Subscription to ASHRAE Handbook Online and 15% off printed edition	\$33 Subscription to ASHRAE Handbook Online \$39 for the CD \$49 for the printed edition	\$33 Subscription to ASHRAE Handbook Online \$39 for the CD \$49 for the printed edition
Discount on Publications	Yes	Yes	Yes	Yes	Yes
Education & Certification Discounts	Yes	Yes	Yes	Yes	Yes
Connect to peers at the local, regional, and international level	Yes	Yes	Yes	Yes	Yes
Monthly ASHRAE Journal	Yes	<i>Digital Only</i>	Yes	Yes	<i>Digital Only</i>
Free Subscription to High Performing Buildings Magazine	Yes	Yes	Yes	Yes	Yes
ASHRAE Insights E-Newsletter	Yes	Yes	Yes	Yes	Yes
ASHRAE HVAC&R Industry Newsletter	Yes	Yes	Yes	Yes	Yes
Hold Office and Vote at Chapter, Regional, and Society Level	Yes	Yes	No	No	No
Participate on Committees	Yes	Yes	Yes	Yes	Yes
Access to member only web pages	Yes	Yes	Yes	Yes	Yes
Group Health Insurance Benefits: Various Products and services at a discounted rate for ASHRAE Members (residing in the US only)	Yes	No	Yes	No	No

[...Continued from Previous Page](#)

On sadder news, we lost two of our members this pass month; Bill Chaisson and Thomas J. Gunning



CHAISSON, William Thomas, P.E. Died peacefully at home on Sunday, February 7, 2016, at the age of 84.

Bill was predeceased by his wife of 62 years, Joan (McCarty) Chaisson. Bill is survived by his brother Robert Henry Chaisson of Newton and eleven children: William Kenneth of Hilton Head, North Carolina; Robert Edward of Auburndale; Jean Elizabeth and her husband Robert Persons, P.E. of Auburndale; Richard Ernest, M.D. and his wife Judith Harding of Baltimore, MD.; Donald Henry and his wife Catherine of Lancaster; Barbara Joan Altman of Waltham; Margaret Ann and her husband James Gilreath of Foxborough; Christine Ellen and her husband Kenneth Thompson of Weymouth; Deborah Jane and her husband Michael Boucher of Canton; John Stuart of Auburndale; and Thomas Daniel of Auburndale. He is also survived by fourteen grandchildren: Madeline Mercado, Daniel Persons, Mark Persons, Melanie Gilreath Chaisson, Lelia Chaisson, Michael Altman, Anton Chaisson Boucher, Dennis Gilreath Chaisson, Clara Chaisson, Bryan Gilreath Chaisson, C. Henry Chaisson, Derek and Meredith Gilreath Chaisson and Alejandra Chaisson; and three great-grandchildren: Mateo, Marcos, and Sofia Mercado. Bill was predeceased by his parents Clarence Henry Chaisson and Lelia Jean (Teasdale) Chaisson and brother Lloyd Burton Chaisson.

He was born on 24 March 1931 in Auburndale, and spent most his life on the same street. After receiving his engineering degree from the University of Maine in Orono, where he was a member of engineering honor society Tau Beta Pi, he returned to Newton and joined his father in the family HVAC business: Capitol Engineering. Bill was a well-known and innovative engineer, and active in numerous industry groups. He served as past president and founding member of Air Conditioning Contractors Association (ACCA), past president of the Boston chapter of American Society of Heating, Refrigeration, and Air Conditioning Engineers (ASHRAE), past president of Air Refrigeration Contractors of Boston (ARC), and active member of Sheet Metal and Air Conditioning Contractors' National Association (SMACNA), Association of Energy Engineers (AEE), and American Conference of Governmental Industrial Hygienists (ACGIH).

Bill was also active in the community, serving on Newton's Design Review Committee for decades. Bill maintained an active role as an engineering consultant, and never considered retiring. He enjoyed spending time with his family, both at home in Newton and in Wellfleet on Cape Cod, and will be missed by all those who had the privilege of knowing him.

Donations, in Bill's memory, may be made to the charity of one's choice .



Thomas J. Gunning of Canton died unexpectedly February 6, 2016. He was 48 years old.

Tom is the devoted husband of Kristen M. Gunning (Andersen). Proud father of Brendan M. Gunning, Shane T. Gunning and Owen A. Gunning. Beloved son of John Sr. and Elaine C. Gunning (Hohmann). Loving brother of John T. Gunning Jr. and his wife Dr. Kristen Gunning, Dianne M. and her husband Kevin Wright, and the late Michael J. Gunning 2nd LT U.S. Army., all of Canton.

Tom is also survived by his loving in-laws Andrew and Kathleen Andersen, Andrew Andersen, Steve and Kate Rooney, Lauren and Chris Staruski, along with several aunts, uncles, cousins, nieces and nephews.

In lieu of flowers donations may be made in Tom's memory to the Thomas J. Gunning Scholarship Fund, c/o SMACNA Boston, 100 Grossman Drive, Braintree, MA 02184.

Tom has been a part of the Local #17 Sheet Metal Union for over 28 years. As the owner of Quality Air Metals, Inc. he is beloved by the entire sheet metal industry.

A devoted, loving husband and father, he was a giver in his everyday life, not only to his wife and 3 beautiful boys, but also to the entire Canton community.

A life-long Canton resident, he gave his heart to coaching both Canton Youth Hockey & Lacrosse and touched many children's lives in doing what he loved.

Those who knew Tom will remember him as a devoted Catholic, a selfless man with a wonderfully goofy sense of humor.

Any comments or questions, please feel free to contact me at dpc@brplusa.com. Looking forward to hearing from you.



GLOBALCON™

Energy, Power, & Facility Management Strategies & Technologies

2016

March 9-10, 2016
Boston, MA
Hynes Convention Center

EXPO
CONFERENCE
SEMINARS
CERTIFICATIONS
SPONSORSHIPS
... are available

— Show Host —

nationalgrid

HERE WITH YOU. HERE FOR YOU.

— Presented by —

AEE
Association of Energy Engineers

— Supported by —

AEE NE
Association of Energy Engineers New England

For details, please visit

www.globalconevent.com

ATTEND THE EXPO... EXPLORE NEW TECHNOLOGIES... SLASH YOUR COSTS... IMPROVE YOUR OPERATIONS!

Wednesday
March 9th, 2016
10am-4pm
Thursday
March 10th, 2016
10am-2pm
HYNES
CONVENTION CENTER
Auditorium & Hall C
Boston, MA

FREE EXPO ADMISSION TICKET



— Presented by —
AEE
Association of Energy Engineers



— Hosted by —
nationalgrid
HERE WITH YOU. HERE FOR YOU.

27TH GLOBALCON 2016 Conference • Seminars • Workshops • Expo www.globalconevent.com

Discover new products,
techniques, solutions,
and services...
Network with industry
professionals...

VIP GUEST OF:
ASHRAE - BOSTON CHAPTER

**COPIES CAN BE MADE
IF NEEDED.**
EXPO ONLY

To register online, print out additional expo tickets, or for more show information, including workshops, visit: www.globalconevent.com

**FOR
EXPO AND
EXHIBIT HALL
WORKSHOPS**

COMPLIMENTARY RAPID EXPO REGISTRATION TICKET

Fax completed ticket to: (770) 447-4354 or mail to: **GLOBALCON 2016 Registrar, AEE, 3168 Mercer University Drive, Atlanta, GA 30341** or email to: Connie@aeecenter.org

OPTION 1: Online. To register online and print out additional expo tickets, visit the GLOBALCON show website at www.globalconevent.com/FreeExpoPass
OPTION 2: Preregister by Fax, Mail, or Email. Your completed preregistration card must be received no later than February 26, 2016. After this date, register onsite at Hynes Convention Center. Your show badge will be mailed to you at the address you provide below. Fax completed ticket to: (770) 447-4354 or mail to: **GLOBALCON 2016 Registrar, AEE, 3168 Mercer University Drive, Atlanta, GA 30341** or email to: Connie@aeecenter.org
OPTION 3: Onsite. After **February 26, 2016**, complete this card and bring it with you to the onsite Expo "Visitor" registration desk located at Hynes Convention Center. Your show badge will be prepared for you for free show admission (\$95 value).

NAME _____
LAST FIRST MI
TITLE _____
FIRM _____
ADDRESS _____
CITY _____
STATE _____ ZIP _____
PHONE _____ FAX _____
EMAIL _____

No one under 16 years of age admitted.

PLEASE COMPLETE AS PART OF REGISTRATION

1. Type of Firm/Business (check only one):

- Commercial Government Utility/Energy Producer
- Industrial Consulting Engineer Manufacturer/Vendor
- Institutional Construction/Architect Press/Trade Media

2. Occupation/Title (check only one):

- Manager Plant Engineer/Facility Manager Educator/Researcher
- Owner/Developer Energy Engineer/ Energy Manager Architect
- Consultant Vice President, President, CEO Sales/Marketing

OPTIONAL:

Please send me information on exhibiting in next year's show.

Our product/service is: _____

Consider upgrading to attend the conference, seminar, or other show functions. See Website.

For more information on this event visit: www.globalconevent.com
For hotel information visit: www.globalconevent.com/hotels
For more information on AEE and its programs, visit: www.aeecenter.org



Webmaster's Notes

By: Steve Rosen

Your Boston Chapter Webmaster welcomes your suggestions as we begin interacting with the NEW ASHRAE Boston homepage!

- The Boston Chapter thanks Kevin Doty for diligently working with Wild Apricot to establish our NEW website!
- Check out our New Roster - under "About Us" - it is called "Member Directory" and can be accessed by logging into the website. Search for people and their contact information.

**ASHRAE Government Affairs Update, 2/18/2016****As of July 1 2015 GGAC changed from Grassroots Government Activities Committee to Grassroots Government Advocacy Committee.****Federal Activities**

2015 was the Earth's warmest year since records began in 1880, the National Oceanic and Atmospheric Administration (NOAA) announced on Jan. 20. In 2015, the average temperature across the Earth's land and ocean surfaces was 1.62°F (0.9°C) above average, the largest margin by which an annual global temperature record has been broken, NOAA said. Record warmth was broadly spread around the world, NOAA reported, with portions of central and South America, Europe, and central Asia seeing some of the warmest temperatures. A separate analysis of data from NASA agreed with NOAA's findings. According to NASA 15 of the 16 warmest years have occurred since 2001.

GGAC Regional and Chapter Activities**Worldwide Warming Trend Continues in January**

January 2016 was the warmest January on record by a large margin, according to NASA's Goddard Institute for Space Studies. It was also the most anomalously warm month since such recordkeeping began in 1880. The month was 1.13°C (2.03°F) above normal. That was higher than December's record of 1.11°C (1.998°F) above average. It marks the fourth month in a row where average temperatures worldwide have been more than 1°C (1.8°F) above normal.

Global 'Green' Building is Expected to Double by 2018

There will be a marked increase in "green" building activities in the United States over the next three years, according to a

new study by Dodge Data & Analytics. Nearly 40% of U.S. buildings industry representatives polled for the study said that more than 60% of their projects would involve green building by 2018. This is significantly higher than the 24% affirmative response in the 2015 version of the study. The greatest percentage of green-oriented construction will involve institutional projects, retrofits of existing buildings and new commercial construction. However, the "World Green Building Trends 2016: Developing Markets Accelerate Global Green Growth SmartMarket Report" also found that the U.S. still lags behind many other countries in terms of green building. Brazil expects six-fold growth in the percentage of companies expecting to make a majority of their projects green; five-fold growth is expected in China; and four-fold growth is expected in Saudi Arabia.

Your Boston GGAC committee welcomes your articles and event suggestions!

Please contact Christine Reinders, Stacie Suh or Steve Rosen.

stacie@stebbinsduffy.com

creinders@CANNONDESIGN.COM

steven_rosen@AHA-engineers.com



RDK ENGINEERS

Proud to be a sponsor for the
ASHRAE Boston Chapter



MECHANICAL
ELECTRICAL
PLUMBING
FIRE PROTECTION
TECHNOLOGY DESIGN
COMMISSIONING
SUSTAINABILITY



Andover | Amherst | Boston | Charlotte | Durham
RDK understands how engineering affects people
www.rdkengineers.com



By: Dan Carington

Every month prior to the main program, the Boston Chapter of ASHRAE's Board of Governors (BOG) meet to discuss Chapter business. This article, based on the secretary's meeting minutes, shall serve as an informative summary for members as to what is happening behind the scenes of the Boston Chapter. Please feel free to contact me with any questions or for additional information.

Meeting Date: February 9, 2016

Review of December Meeting Minutes

Each Board of Governors meeting begins with a review and eventual vote to approve the previous month's meeting minutes. Any items that required follow-up are updated and closed or are determined to be carried forward once again.

The meeting minutes were approved for January 2016.

2015/2016 Schedule

Discussion of our February technical session and main program were approved for 1 PDH credit.

Discussion of our new Boston Chapter website was reviewed on its current contents. There was further discussion of the new Product and Energy Show. Our Chair discussed the Roster and Product Guide and new layout. Discussed High Profile advertisement magazine add. Jack's Abby Brewery reorganizing tour fee so tour will need to be reevaluated with this tour or look somewhere else, back to square one.

Additional Miscellaneous Items Discussed

The following topics were briefly discussed:

- **Employer Recognition** – Plaque to be a virtual plaque on the website, three companies are to be determined this year, next year build on it to top 10 companies that participate at ASHRAE Boston meetings
- **Committee Chair Responsibilities** – Chapter President, Stacie Suh, suggested that all Committee Chairs stay on top of their Presidential Award of Excellence points accordingly.
- **Membership Update** – Membership numbers are at 1041 members strong. On sadder news mentioned the passing of a former Boston Chapter President William Thomas Chaisson and Thomas J. Gunning, both passed away last month.



By: Mike Gilroy

How to Hack the Power Grid Through Home Air Conditioners

TENERIFE, SPAIN—THERE ARE many ways we know of to cause a blackout. You could hack industrial equipment to spin a generator out of control. You could hijack operator machines and remotely open breakers. Or you could launch a sniper assault on substations and shoot out transformers.

Now researchers have found another way to take down the power grid: by remotely manipulating home and office air conditioners to create a surge. It's an attack that grid experts told WIRED has the potential to be very serious.

The hack targets remote shut-off devices that utility companies install on air conditioners to conserve energy during peak summer periods. Many power companies offer discounts to customers if they agree to install the devices, which let the utility company remotely turn off their air conditioner when it's hot outside and demand for power is high.

The devices, which can be installed on both central air conditioning systems as well as window-installed units, can be easily manipulated by hackers, say Vasilios Hioureas of Kaspersky Lab and Thomas Kinsey of Exigent Systems, who conducted their research as part of the Securing Smart Cities initiative. The two presented their findings today at the Kaspersky Security Analyst Summit.

The way the system works is that operators at regional power centers send a command via radio frequency that gets amplified through repeater stations installed throughout a city to reach the devices and shut down air conditioners. But because the systems Hioureas and Kinsey examined don't encrypt that communication and don't use authentication to prevent unauthorized parties or systems from communicating with them, anyone in the vicinity who can emit a stronger signal than the one the utility company sends out through the repeater stations can manipulate the devices as well.

"Anyone with \$50 can generate a signal that can trump a repeater [to take out a few air conditioners]; and anyone with \$150 can generate that through an [amplifier] and presumably take out a whole neighborhood," says Kinsey. "And obviously you can scale that up as much as you want to [depending on the strength of your signal]."

A hacker could directly attack a group of homes or offices by taking advantage of the fact that unique IDs are assigned to groups of devices, allowing them to be singled out.

A hacker could cut air conditioners during a heatwave—creating a potentially fatal condition for the elderly and

sick—or turn air conditioners on during peak energy periods, causing a surge that creates a widespread blackout. Or a hacker could directly attack a group of specific homes or offices by taking advantage of the fact that unique IDs are assigned to groups of devices, allowing them to be singled out.

According to another researcher, the hack could be even worse. If an attacker were to turn the air conditioners on and off repeatedly, they could create disturbances and imbalances in the grid that could trip breakers beyond the neighborhood they're targeting and cause an even more widespread blackout.

"This is bad, and that's why we need better security so that we don't have the ability to manipulate the load," says Eric Johansson, founder of Management Doctors, a security firm in Sweden that specializes in SCADA. "You shouldn't be able to do this."

The attack against the devices requires little skill. All a hacker would need is to be on the same radio frequency as the utility company, and then they could monitor and record the commands the company sends to the devices (a technique known as sniffing). From there, they could just play back those recorded commands to other devices to get them to turn on or off (a so-called "replay" attack).

"This is the funny part, to show how ridiculously insecure it really is, you don't have to even know anything or reverse-engineer anything and you can reproduce the result [by doing a replay attack]," says Hioureas.

An attacker could also simply jam the RF traffic with noise to prevent the power company from communicating with the devices to turn air conditioners on or off, simply preventing them from shutting down the devices during peak hours.

The two researchers wouldn't identify the devices they examined since they're still in the process of reaching out to vendors. But Kinsey says that the chips used in some of them are so out-dated and limited—one system they examined used a chip made in 1995—that even if the vendors wanted to add authentication to make the devices more secure he doubts they could do it.

"It doesn't look like there's room [to add authentication]...it looks like the hardware is not capable of doing something like that," he says.



JOIN US THURSDAY MARCH 31ST at 6PM for our 2nd Annual YEA Cornhole Tournament.



Boston Cornhole will be hosting our tournament at the Baseball Tavern 1270 Boylston Street.

It will be a double elimination tournament again with randomly selected teams.

Check your inbox for the invitation or check out our facebook page! <https://www.facebook.com/bostonashraeyea>

E-mail Christine with any questions creinders@cannondesign.com

You may also register through the evite page at <http://evite.me/4NnWsdQf2n>

ASHRAE BOSTON UPCOMING EVENTS

Visit www.ashraeboston.org/upcoming-events/announcements.html for more information.

March Meeting

When: March 8, 2016

Where: Metro Meeting Centers, Boston

April Product Show

When: April 12, 2016

Where: The Lantana

May Installation of Officers

When: May 10, 2016

Where: TBD

June Golf Outing

When: June 6, 2016

Where: Halifax Country Club

BOSTON AREA UPCOMING EVENTS

AFE Boston Chapter 33

www.afechapter33.org

IFMA Boston Chapter

www.ifmaboston.org

BOMA Boston Chapter

<http://www.gbreb.com/boma/>

Sustainable Performance Institute

<http://www.sustainable-performance.org/>

AFE Chapter 74-Worcester Area-Central MA

<http://chapters.afe.org/chaptersnew/index.cfm?chapterIndex=2>

USGBC Massachusetts Chapter

www.usgbcma.org

AEE New England Chapter

www.aeenewengland.org/

IBPSA Boston Chapter

<http://ibpsa-boston.com/>



**New England Association
Of
Fire Protection System Designers**

AMERICAN SOCIETY OF CERTIFIED ENGINEERING TECHNICIANS

Save the Date!
**2016 NEAFPSD 25th Chapter Anniversary and
Fire Protection Symposium**
March 9, 10 & 11, 2016
Bartlett, New Hampshire

**All Chapter Members, Engineers, Contractors, Industry Manufacturer Representatives
and their Friends and Family are welcome to attend our Chapter's 25th Anniversary
and Symposium Event.**

*We have signed the Contract, reserved blocks of rooms and coordinated special features
for this long awaited, well attended event.*

**We have locked in Outstanding Speakers including our Opening Night Dinner Speaker,
founding father, Maurice Pilette, with an overview of our Chapter's 25 year History.**

There will be a formal Table Top Product Show
Technical Presentations with CEU Credits
Industry Networking with Latest Industry Topics and Products
Family Friendly Event with non-technical Activities to do around the Conference Center
and nearby North Conway for Family and Friends
Welcome Bag Giveaway's, Free Raffles and Symposium Gifts to all Registered Guests

Your Symposium Committee has attached the registration form for all attendees and
separate affiliate sign-up sheets for the Product Show and Symposium Sponsorships

There is an early Registration Raffle incentive noted on the Attitash Form for all registrations received and
confirmed in good standing to Attitash by 3 PM, January 8, 2016.



Early registration is very much appreciated
For all questions and information contact:
Paul Taylor - ptaylor@trojb.com



The New Product & Energy Show 2016 Date: April 12, 2016

The Officers and Board of Directors of the Boston Chapter of ASHRAE are pleased to extend an invitation to your organization to participate / exhibit at the 15th Biennial Product Show to be held at Lantana's in Randolph, MA on April 12, 2016.

This show has always been well attended in the past, not only by the general ASHRAE membership, but also by others who work in this field, including Facility Engineers, Hospital Engineers, Building Owners and Mechanical Contractors. The local New Product & Energy Show targets a specific audience where you can talk to the customers who matter to you. Admission is free to all attendees.

Below are the specific details of the New Product & Energy Show. Please email Jeff Schultz if you are interested in participating at this event. Also if you are interested in trailer spot opportunity, please contact Bill Garvey at wgarv@aol.com.

D A T E : TUESDAY, APRIL 12, 2016 ; 1:00 P.M. TO 8:30 P.M.

Seminars 1:00 p.m. to 5:00 p.m.

Product Show 3:00 p.m. to 8:15 p.m.

Dinner 6:00 p.m. to 8:00 p.m.

L O C A T I O N : LANTANA'S

Routes 28 and 128

Randolph, MA

E X H I B I T O R R E G I S T R A T I O N :

Price \$900.00 per single booth; Multiple adjoining booths are available.

Reservations are on a first come- first serve basis.

Registration forms will be mailed to vendors in early January.

If you have not exhibited at our show before, but would like to this year, please contact the show chairpersons to be placed on our permanent mailing list and have a blank reservation form sent to you.

Registration forms will be stamped in order of receipt. Booths are limited. **Checks registration (completed) must be received by March 25, 2016. Please pay through Paypal: Ashraeboston@gmail.com with additional \$25 processing fee for each booth.**

B O O T H S : Single – 8 feet wide x 6 feet deep

Double – 16 feet wide x 6 feet deep

A pre-printed sign will be attached to the backdrop with your company name.

- Draped booths will be set up labeled prior to your arrival.
- Tables 72" x 30" will be available upon your advanced request.
- Electricity is available only upon your advanced request. No heavy electrical loads will be permitted. **Please bring your own extension cords.**
- Water and drains are **not** available.
- Internet connections available at an additional charge through Lantana's.

F O O D : A complimentary buffet dinner will be available to all attendees of the show.

S E M I N A R S : ASHRAE has reserved the facility for the entire day. Rooms are available for seminars from 3:00 p.m. to 6:30 p.m. Please contact Jeff Schultz at Jeffrey.Schultz@dpsgroupglobal.com if you are interested in providing a seminar. An outline of the seminar material will need to be submitted prior to approval. The seminars are intended to be educational and not commercial in nature.

Thank you for your interest and participation in the Boston Chapter – ASHRAE Product Show. You will receive a confirmation letter with additional information, plus some invitations for you to distribute to your customers who may not have received one. Please visit www.ashraeboston.org for more information and also for updated booth layout of exhibits.

Please contact me at Jeffrey.Schultz@dpsgroupglobal.com should you have any questions.

Sincerely,
Jeffrey H. Schultz



RESEARCH PROMOTION

By: Dan Diorio

I'd like to first say thank you to our most recent contributors to this year's Research Promotion fundraising campaign! Monthly donations have kept coming in, and that's important. That said, the real push is about to start as we have until June 30 to reach our Boston Chapter goal of \$22,800.

If you're interested in making a contribution toward ASHRAE Research, I encourage you to spend some time on the RP website at www.ashrae.org/research. While you're there, take a look at the interesting section that I particularly enjoyed, ASHRAE Research and You.

<https://www.ashrae.org/standards-research--technology/ashrae-rp>

Under the ASHRAE Research and You, you will find several interesting lists of standards and projects that seem to apply to your everyday life. Enjoy!

Donations to ASHRAE RP can be made in several ways. You can donate online at ashraeboston.org or ashrae.org/contribute. Your company can become a Corporate Sponsor - where a portion of your sponsorship goes toward Research. A large portion of the proceeds from our New Product & Energy Show booth sales go directly to RP. You can also donate by mailing a check directly to me at:

Dan Diorio
 Boston College – St. Clements Hall
 140 Commonwealth Ave
 Chestnut Hill, MA 02467

Feel free to contact me with any questions about ASHRAE Research, my fundraising campaign, or donations in general at dan.diorio@bc.edu.



The Boston Chapter of ASHRAE
American Society of Heating, Refrigerating, and Air Conditioning Engineers

Cordially invites you to the

2016 Biennial Chapter The New Product & Energy Show

Tuesday, April 12th, 2016

Complimentary Seminars: 9:00 AM - 6:15 PM
Complimentary Product Show: 3:00 PM - 8:30 PM
Complimentary Buffet-style Dinner: 6:00 PM - 8:00 PM

THE LANTANA
 43 Scanlon Drive, Randolph, MA
www.thelantana.com • free parking

Attendance is free, but we ask that you RSVP via our website:
<https://ashraeboston30.wildapricot.org/event-2131878/Registration>

Seminar Schedule:



9:00 AM - 6:15 PM

WHAT HAPPENS WHEN YOU DON'T???

Wind, Seismic, Flood & Snow, Requirements of the International Building Code & Related Codes for Non Structural Components IBC 2009 & 2012, IMC, IPC, NEC, NFPA, IFGC & ASCE 7-10
 [6.0 PDH] • Richard Berger (VMC Group)

3:00 PM - 4:30 PM

Remarkable Long Term Performance in an Open Water Cooling System

[1.0 PDH]
 Ed Block (MIT)

The Basics of Geothermal HVAC And Its Application in New England

[1.0 PDH]
 George Hu (AWE)

ASHRAE 62.1 Ventilation Strategies for improving indoor air quality and meeting, or exceeding, the standard.

[1.0 PDH]
 Nishant Kanapilly (Renewaire)

Electrically Commutated Permanent Magnet Motors (ECPM) Technology

[1.0 PDH]
 Andy Holden (NovaTorque)

4:45 PM - 6:15 PM

Applying VRF

[1.0 PDH]
 Rob Powell (Daikin)

CO2 is not the enemy! How to improve IAQ by not reducing CO2

[1.0 PDH]
 Charles Waddell
 (GPS-Global Plasma Solutions)

Emergency Standby Generator Sets and CHP- Combined heat and Power using Gas power systems

[1.0 PDH]
 Nick Paolo
 (MTU Onsite Energy Corporation)

Energy Savings Strategies Including FDD, Analytics, and Data Visualization

[0.1 CEU]
 Michael Facente (Automated Logic)

Interested in a booth? Want to know who already has a booth?
 Visit our website at www.ashraeboston.org



STUDENT ACTIVITIES

By: Dan Diorio

You have almost made it to Spring Break. Following that, you are in the home stretch of the spring 2016 semester. Hang in there!

Speaking of hanging in there... I'd like you each to take some time to appreciate the job that your Student Branch Advisor does to support your chapter. Each year, ASHRAE recognizes the Student Branch Advisor of the Year with an award. Please take a look at the following form and consider nominating your advisor for this prestigious award.

<https://www.ashrae.org/File%20Library/docLib/Student%20Zone/SBA-of-the-year.pdf>

Recently, your student chapter advisors received an invitation to an activity that I have been in the process of planning. Construction is winding down on the new 490-bed residence hall located on the northeast corner of Boston College's Chestnut Hill Campus. 2150 Commonwealth Avenue will open for the fall 2016 semester and contain numerous state-of-the-art MEP systems and equipment. For interested Student Branches, I'd like to schedule a visit to the construction site that would include a short presentation on the project followed by a tour of the new building. These tours can be scheduled at your convenience. I realize that the spring semesters can be busy for students – so we're flexible! Below is a link to more information regarding the project at 2150 Commonwealth Ave. I look forward to hearing from you and seeing you on campus.

[http://www.bc.edu/offices/pubaf/specialreports/2150 Commonwealth Avenue.html](http://www.bc.edu/offices/pubaf/specialreports/2150%20Commonwealth%20Avenue.html)

Please contact me at any time via email at dan.diorio@bc.edu or stop by and say hello at one of the monthly meetings.

Attendance High for ASHRAE Winter Conference, AHR Expo

ATLANTA – High attendance was reported for the recent ASHRAE Winter Conference and AHR Expo, in Orlando. The 2016 ASHRAE Winter Conference, was held Jan. 23-27, with the AHR Expo held Jan. 25-27.

The Winter Conference had more than 3,000 attendees. Attendance this year was higher than the past eight Winter Conferences, except Las Vegas 2011. Attendees came from 67 countries. The 2016 AHR Expo, co-sponsored by ASHRAE, set a record by being the first show outside of Chicago to break 400,000 square feet of exhibitor space. The Expo featured 2,063 exhibitors, including 561 deemed international. The total attendance for visitors was 42,672, with total attendance of visitors and exhibitors at 60,926.

Best sellers at the ASHRAE Bookstores included the Pocket Guide I-P; “HVAC Design Manual for Hospitals and Clinics,” 2nd edition; “Cold-Climate Buildings Design Guide;” Guideline 0-2013, *The Commissioning Process*; Standard 188-2015, *Legionellosis: Risk Management for Building Water Systems*; “HVAC Simplified;” and the “Design Guide for Tall, Supertall, and Megatall Building Systems.”

The Conference’s Technical Program ranked high in attendance, with new tracks focused on design-build practices and residential systems. Individual top-attended sessions in the technical program were related to Cooling with the Sun: Solar Thermal Cooling; Energy Submetering Fundamentals: Benchmarking, Baselineing and Beyond!; The Impacts of Operable Windows on Building Performance; Highlights from the 24th IIR International Congress of Refrigeration; The Internet of Everything: How Smart and Connected Sensors Will Transform the HVAC Service Industry; HVAC Pumps: New ECM Motor and Control Technologies; Indoor Air Quality and Energy Efficiency: Measurement and Analysis of Multiple Approaches; Back to Basics: The Science, Application and Art of Load Calculations; Integrating Cutting-Edge Technology: Renewable Energy and Thermal Energy Storage; and Hydronic Systems: Doing More with Less.

Also offered were a combined 20 Professional Development Seminars and Short Courses from ASHRAE Learning Institute. The most popular Short Course offerings were Variable Refrigerant Flow Systems; Complying with Standard 90.1: HVAC/Mechanical; and Designing High-Performance Healthcare HVAC Systems. The Professional

Development Seminars that drew the highest number of registrations were Energy Modeling Best Practices & Applications; Commercial Building Energy Audits; and Commissioning Process for New & Existing Buildings.

The 2016 ASHRAE Annual Conference takes place in St. Louis, Mo., June 25-June 29, 2016. The 2017 ASHRAE Winter Conference takes place Jan. 28-Feb. 1, Las Vegas, Nev., with the AHR Expo being held Jan. 30-Feb 1.

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 54,000 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.

ASHRAE Learning Institute 2016 Spring Online Course Series

2 WAYS TO REGISTER

Take 3 or more courses and save 15% off registration!

Internet: www.ashrae.org/onlinecourses

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

Price: **\$284** (\$219 ASHRAE Member); Two-part courses: **\$484** (\$359 ASHRAE Member)

Note: You may register up to 24 hours prior to an online course. Courses are in US Eastern Time.

Combined Heat & Power: Creating Efficiency through Design & Operations

Mon, March 28, 2016 – 1:00 pm to 4:00 pm EDT

Commissioning Process & Standard 202

Wed, March 30, 2016 – 1:00 pm to 4:00 pm, EDT

IT Equipment Design Evolution & Data Center Operation Optimization

Wed, April 6, 2016 – 1:00 pm to 4:00 pm, EDT

Complying with Standard 90.1-2013: HVAC/Mechanical

Wed, April 13, 2016 – 1:00 pm to 4:00 pm, EDT

Laboratory Design: The Basics and Beyond

Mon, April 18, 2016 – 1:00 pm to 4:00 pm, EDT

Standard 188-2015 – Successfully Managing the Risk of Legionellosis

Mon, April 25, 2016 – 1:00 pm to 4:00 pm, EDT

Air-to-Air Energy Recovery Applications: Best Practices

Wed, April 27, 2016 – 1:00 pm to 4:00 pm, EDT

Fundamental Requirements of Standard 62.1-2013

Mon, May 2, 2016 – 1:00 pm to 4:00 pm, EDT

Variable Refrigerant Flow System Design & Applications

Mon, May 16, 2016 – 1:00 pm to 4:00 pm, EST

The following courses are comprised of two parts. Registrants must attend both parts in order to receive CEU/PDH credits.

Exceeding Standard 90.1-2013 to Meet LEED® Requirements

Part 1: Mon, April 11, 2016 – 1:00 pm to 4:00 pm, EDT

Part 2: Wed, April 20, 2016 – 1:00 pm to 4:00 pm, EDT

Operations & Maintenance of High-Performance Buildings

Part 1: Tue, May 17, 2016 – 1:00 pm to 4:00 pm, EDT

Part 2: Wed, May 18, 2016 – 1:00 pm to 4:00 pm, EDT

ASHRAE HVAC Design Training

2 Courses, 5 Days of Intense Instruction

Atlanta • Cleveland • Halifax • Hong Kong • Kuala Lumpur

Miami • Minneapolis • San Francisco • Vancouver

HVAC Design: Level I – Essentials - Registration is \$1,264 (\$1,009 ASHRAE Member)

Gain practical skills and knowledge in designing 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 - Registration is \$854 (\$699 ASHRAE Member)

HVAC Design: Level II – Applications provides instruction on HVAC system design for experienced HVAC designers and those who complete the HVAC Design: Level I – Essentials training. The training provides information that allows practicing engineers and designers an opportunity to expand their exposure to HVAC systems design procedures for a better understanding of system options to save energy.

Visit www.ashrae.org/hvactraining to register.

2015-2016 Meeting Schedule

Date	Main Meeting/ Tech Session	Speaker	PDH Credits	Meeting Manager	Location/ Special Night
September Wednesday September 9, 2015	TD Garden Dehumidification System Tour	Chris Trent- Siemens Pat McDonald- Eversource Andrew or Jason- DNC David Trumble – Cannon Design Enis Pacavar – Sylvania Lighting		Mark Leonard MCL@BRPLUSA.COM	TD Garden Boston, MA
October Tuesday October 13, 2015	Towards ZEB (Zero energy buildings) in Europe and Application of Radiant Heating and Cooling Systems Tech Session: Passive Cooling with Increased Night Ventilation in Low Energy Buildings	Per Heiselberg Bjarne W. Olesen Guilherme Carrilho da Graça , Annamaria Belleri & Per Heiselberg	1.0	Mark Leonard MCL@BRPLUSA.COM	Metro Meeting Centers, Boston—101 Federal St. Membership and Student Promotion Night
November Tuesday November 10, 2015	Net zero commercial buildings – how to design and maintain indoor air quality Tech Session: Changing Refrigerant	Bill Turner HLTURNER Group Steve Tafone		Mark Leonard MCL@BRPLUSA.COM	Embassy Suites, Waltham Research Promotion & Donor Recognition Night Joint Meeting with IAQA
December Tuesday December 8, 2015	ASHRAE SPC-188 Legionellosis: Risk Management for Building Water Systems Tech Session: Remarkable Long Term Performance in an Open Water Cooling System	Tom Watson Ed Block		Mark Leonard MCL@BRPLUSA.COM	Embassy Suites, Joint Meeting with ASPE
January Thursday January 14, 2016	Electrically Commutated Permanent Magnet Motors (ECPM) Technology Tech Session: Special Gas Venting Systems	Steve Bistak Warren E Creamer III (Skip) / Atlantic Air Products	1.0 1.0	Mark Leonard MCL@BRPLUSA.COM	Embassy Suites, Waltham Past President's & History Night
February Tuesday February 9, 2016	Infrastructure Resiliency Design in Healthcare. Post Superstorm Sandy Tech Session: Power and Energy Metering	Steven Friedman Brad Selmon		Mark Leonard MCL@BRPLUSA.COM	Metro Meeting Centers, Boston—101 Federal St. Membership Promotion, Research Promotion & YEA Night
March Tuesday March 8, 2016	Case Histories of Both Productive and Problematic Interactions Between Architectural Designs and HVAC Tech Session: GroundSource Case Study	Lew Harriman George HU		Mark Leonard MCL@BRPLUSA.COM	Metro Meeting Centers, Boston—101 Federal St. Joint Meeting with AEE
April Tuesday April 12, 2016	Product Show Tech Session: TBD	Jeff Schultz N/A		Jeff Schultz Jeffrey.schultz@dpsgroupglobal.com	The Lantana Student & YEA Night
May Tuesday May 10, 2016	Installation of Officers	William Tang	N/A	Event Committee/WT	TBD Sponsors Recognition Night
June Monday June 6, 2016	Golf Outing	William Garvey	N/A	Golf Committee	Halifax Country Club, Halifax, MA

OFFICERS

President
Stacie Suh,
Stebbins Duffy,
Inc.
781-258-1002
Stacie@stebbinsduffy.com

Secretary
Mike Gilroy,
BR+A
617-925-9255
mpg@brplusa.com

President-Elect
William Tang,
BR+A
617-254-0016
wkt@brplusa.com

Treasurer
William Garvey,
RDK Engineers
781-910-9576
wgarv@aol.com

Vice President
Mike Gilroy,
BR+A
617-925-9255
mpg@brplusa.com

BOARD OF GOVERNORS

2015-2018	2014-2017	2013-2016
Daniel Diorio Boston College 617-552-8772 daniel.diorio.2@bc.edu	Dan Carington BR+A 617-925-8236 dpc@brplusa.com	Siobhan Carr MIT 617-324-7268 siobhanc@mit.edu
Jim Liston BuroHappold Engineering 617-606-9120 James.liston@burohappold.com	William Garvey RDK Engineers 781-910-9576 wgarv@aol.com	Mike Gilroy BR+A 617-925-9255 mpg@brplusa.com
Justin Mole Cannon Design jmole@cannondesign.com	Mark Leonard BR+A 617-925-8322 mcl@brplusa.com	Stephen Nicholas Air Industries 978-682-9993 snicholas@airinds.com
Erin Popa BR+A 617-925-8205 epopa@brplusa.com	Teri Shannon DAC Sales 207-985-0873 tshannon@dac-hvac.com	

COMMITTEES

Attendance Erin Popa BR+A 617-925-8205 epopa@brplusa.com	Grassroots Government Activities Steven Rosen AHA Consulting Engineers Steven.Rosen@aha-engineers.com	Nominating Bob Persechini RDK Engineers 617-345-9885 rpersechini@rdkengineers.com	Publicity Andrew Krenning Siemens Industry, Inc 781-589-4097 andrew.krenning@siemens.com	Website Steven Rosen AHA Consulting Engineers Steven.Rosen@aha-engineers.com
Chapter Program Mark Leonard BR+A 617-925-8322 MCL@BRPLUSA.COM	Christine Reinders Cannon Design Creinders@cannondesign.com	Research Promotion Daniel Diorio Boston College 617-552-8772 dan.diorio@bc.edu	Refrigeration Steven Tafone Suffolk Construction 978-774-1057 stafone@suffolkconstruction.com	WiA Stacie Suh Stebbins Duffy, Inc. 781-258-1002 Stacie@stebbinsduffy.com
Chapter Technology Transfer Mike Gilroy BR+A 617-925-9255 mpg@brplusa.com	Stacie Suh Stebbins Duffy, Inc. 781-258-1002 Stacie@stebbinsduffy.com	NorthEastAire Deanna Adkison AKF Group 617-535-8236 dadkison@akfgroup.com	Joseph Dussault JDussault@engsolutions.com	Deanna Adkison AKF Group 617-535-8236 dadkison@akfgroup.com
CRC Alternate William Tang, BR+A 617-254-0016 wkt@brplusa.com	Historian Eric Edman BR+A 617-925-8325 eme@brplusa.com	The New Product Show & Energy Show 2016 Jeffrey Schultz DPS Engineering 508-861-3741 jeffrey.schultz@dpseng.com	Student Activities Daniel Diorio Boston College 617-552-8772 dan.diorio@bc.edu	YEA Christine Reinders Cannon Design Creinders@cannondesign.com
CRC Delegate Daniel Diorio Boston College 617-552-8772 dan.diorio@bc.edu	Honors & Awards Darcy Carbone Stebbins Duffy, Inc. 617-957-2567 dcarbone@stebbinsduffy.com	Professional Development Steve Bosland EYP Architecture & Engineering 617-305-9831 sbosland@eypae.com	Sustainability Siobhan Carr MIT 617-324-7268 siobhanc@mit.edu	Justin Mole Cannon Design jmole@cannondesign.com
Golf Outing William Garvey RDK Engineers 781-910-9576 wgarv@aol.com	Membership Promotion Dan Carington BR+A 617-925-8236 dpc@brplusa.com		Lance Brown lance@andelmanlelek.com	
			Joseph Dussault JDussault@engsolutions.com	

Investors Who
Care About
Tomorrow

ASHRAE RESEARCH

ASHRAE Boston Chapter Contributors

Mr Robert J Persechini	Mr Jeffrey Zajac	Mr. William J Garvey
Mr David A DeMoura, PE	Ms Darcy A Carbone	Mr. Daniel P Diorio
Mr Allan E Ames	RDK	Mr. Brian E Austin
Mr Brian Abbott	Renewaire	Mr. Michael J Daigneault
Mr Bruce Luchner	RG Vanderweil	Mr. John Celona
Mr Warren E Hudson	Stebbins Duffy	Equipment Direct Sales
Mr David Goodman	Victaulic	Mr. Kenneth W Crooks
Mr Seshappa Chandrashekar, PE	Daikin	Mr. Gary M Elovitz
Mr Michael P Gilroy	Filter Sales & Service, Inc.	J.S Flemings Associates
Mr Daniel P J Carington	RST Thermal	Mr. Richard Bialobrzewski
Mr Albert J Santoro	R.T. Forbes Company	Walsh Mechanical Contractors
Mr John A Iacopucci	Mr. David H Blum	
Ms Stacie Suh		
Mr William K Tang		

CONTACT DAN DIORIO NOW! at 617-552-8772 or daniel.diorio.2@bc.edu

Mail Check (Payable to "ASHRAE Research") to:

ASHRAE RESEARCH

Daniel Diorio

Boston College—St. Clements Hall

140 Commonwealth Ave.

Chestnut Hill, MA 02467

Name: _____

Company: _____

Address: _____

TEL: _____

Your contribution puts us closer to achieving our goal. Please send what you can today!

Individual contributions of \$100 or more and Corporate contributions of \$150 or more receive this year's

Commemorative Coin and Honor Roll Contribution status.

INDIVIDUAL

\$25.00	\$50.00	\$100.00	\$200.00
---------	---------	----------	----------

Other: _____

CORPORATE

\$250.00	\$500.00	\$1,000.00	\$2,000.00
----------	----------	------------	------------

Other: _____



NorthEastAire

ASHRAE - BOSTON CHAPTER www.ashraeboston.org

Deanna Adkison
AKF Group
99 Bedford St., 2nd FL
Boston, MA 02111