

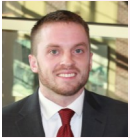
2015-2016 Officers



Stacie Suh
President



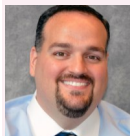
William Tang
President-Elect



Mike Gilroy
Vice President



Dan Carington
Secretary



Bill Garvey
Treasurer

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April Meeting

Tuesday, April 12, 2016

Main Meeting:

**2016 Biennial Chapter The New
Product and Energy Show**

Tech Session:

TBD

Student and YEA Night

Chairperson:

Jeff Schultz
Jeffrey.schultz@dpsgroupglobal.com

Where:

The Lantana
43 Scanlon Drive
Randolph, MA

Time:

| | |
|------------------|---------------------|
| 9:00 am -6:00 pm | Seminars |
| 3:00-8:30 pm | Product Show |
| 6:00-8:00 pm | Buffet-style Dinner |

Cost:

| | |
|-----------------------------------|------|
| ASHRAE Boston Members: | Free |
| Non -Members / Walk-Ins: | Free |
| ASHRAE Student Members with RSVP: | Free |

Please RSVP via:

[https://ashraeboston30.wildapricot.org/
event-2131878/Registration](https://ashraeboston30.wildapricot.org/event-2131878/Registration)

Refer to Page 12 for more information

Parking:

Free parking available

Special thanks to our Sponsors:

Platinum:

SMACNA Boston, Inc.

Gold:

RDK Engineers
J.S Flemings Associates

Silver:

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

Please register online at [https://ashraeboston30.wildapricot.org/event-2131878/
Registration.](https://ashraeboston30.wildapricot.org/event-2131878/Registration)

If you have any questions, you may contact Jeff Schultz at
[Jeffrey.schultz@dpsgroupglobal.com.](mailto:Jeffrey.schultz@dpsgroupglobal.com)

Thank You



PRESIDENT'S MESSAGE

By: Stacie Suh

We are pleased to announce that our new website is up and running. Please check out www.ashraeboston.org. New items include Employer Recognition page (under About us), member directory (under About us) and committee pages. Email Kevin at kevin.doty@victaulic.com for any questions.

ASHRAE Boston Chapter had its last meeting at 101 Federal St in Boston. We are very pleased to let you know that the meeting was a success. We had our joint meeting with AEE and Sam Nutter, AEE Local chapter President, said few words during the meeting.

We need your support to get your feedback with regards to 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 March meeting, please refer to the meeting recap section written by Andrew Krenning for details of the meeting.

I would like to first thank Lew Harriman for a great presentation on Real World Integrated Design –Case Histories of Both Productive and Problematic Interactions between Architectural Designs and HVAC Systems. Secondly, I would like to thank the technical session speaker, George Hu from AWE, for a great presentation on Basics of Geothermal HVAC and Its Applications in New England.

I would like to also thank all attendees at the March 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 April 12 (Tuesday) at Lantana's in Randolph MA. Please join us at the New Product & Energy Show 2016. We are very excited to have you all come and check out new and innovative HVAC products. We have sold the last booth this week! Hard work

was put in by our committee, Jeff Schultz, Bill Garvey, Steve Bosland, Eric Edman and Kevin Doty.

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.

The ASHRAE Boston chapter has made corporate sponsorship opportunities available. 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 SMACNA, Daikin, RDK Engineers, RenewAire, RG Vanderweil, Stebbins Duffy, Filter Sales & Service, Inc, R.T. Forbes Company, J.S. Fleming Associates and Victaulic who are already part of the sponsorship program and supporting the Boston Chapter.

ASHRAE Boston Chapter will be hosting the Product show in April 2016. Please signup to attend the show and seminars. For more information go to <https://ashraeboston30.wildapricot.org/event-2131878/Registration>.

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

Thank you



Stacie Suh

ASHRAE Chapter President



Materials for the May newsletter are due by **April 15, 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.

EDITOR'S NOTE

By: Deanna Adkison

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



March Meeting Recap

By: Andrew Krenning

The joint March ASHRAE Boston and AEE New England chapter meeting was held at the Metro Meeting Center. The



evening started with a networking and social hour allowing the members and attendees from both organizations to socialize. The meeting portion of the evening was kicked off by ASHRAE Boston President Stacie Suh who welcomed everyone from both chapters in attendance. She started with introducing AEE New England President Samuel Nutter. Mr. Nutter provided some details on the upcoming GLOBALCON conference that was being held that week in Boston at the Hynes Convention Center. He also expressed gratitude towards ASHRAE Boston Chapter members for continuing the joint meeting campaign as well as hosting the meeting in downtown Boston.



The main presentation was given by Lew Harriman on Real-Work Integrated Design – Case Histories of both Productive and Problematic Interactions between Architectural Designs and HVAC systems. Mr. Harriman is the 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 2010 Lew was elected a Fellow of ASHRAE and in 2012 he received an appointment as an ASHRAE Distinguished Lecturer. He started off the presentation talking about the strong connection and relationship between the HVAC systems and the overall building enclosure. If either of these elements aren't properly designed together, it can lead to issues throughout

the buildings life. The fundamental issue revolves around the normal pressure of a dynamic relationship and how the design deals with those elements. Air infiltration into a building can cause serious problems in all climates and will



also impact the overall building energy use, occupant comfort, condensation and possible mold growth. The architectural design and installation can create the gaps that allow the infiltration, but it's the HVAC design and installation that creates the pressure that determines the amount of infiltration into the building. Both building leaks and HVAC leaks can create problems, but HVAC leaks most of the time create a majority of the issues within the building.

Look forward to seeing everyone at next chapter meeting that will be held on Tuesday, April 12th at Lantana's for The New Product and Energy Show.

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



COME JOIN THE ASHRAE BOSTON CHAPTER FOR OUR 51ST ANNUAL GOLF OUTING

WHEN: MONDAY JUNE 6, 2016

We are appealing to your continued generosity for monetary contributions for the purpose of purchasing gifts to be awarded as golf and door prizes. In order to give the Prize Committee ample time to purchase these gifts, we would appreciate re-



Very truly yours,
ASHRAE Golf Outing Committee

A donation of fifty dollars would be most welcome and more would be greatly appreciated! All donations will be publicly acknowledged by being published in the NorthEast Aire bulletin.

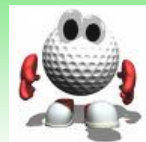
We also welcome Hole Sponsorship. If you are interested in participating, please return the completed form (found in



ASHRAE Golf Outing Committee

c/o Bill Garvey

66 Morton St





BOSTON CHAPTER GOLF OUTING

- Date: MONDAY, June 6, 2016
- Place: COUNTRY CLUB OF HALIFAX, Halifax, Massachusetts
- Who: ASHRAE members and guests, by reservation only. Tickets will be sold on a first-come, first-serve basis, and all reservations **MUST BE MADE BY MAY 27, 2016.**
- Price: \$150.00—NO TICKET SALES AT THE DOOR
This includes greens fees, electric carts, cheese table for cocktail hour, and five course dinner. Prizes for everyone plus golf prizes.
- Halifax Tee Time: We will have a shot gun start. Two foursomes (total of 8) will drive their carts out to their pre-assigned tee (on Par 3 tees, only one foursome will tee off). Eighteen foursomes will tee off at the same time, 1:00 PM sharp. It is 1:00 PM important that you be there ahead of time. **The format this year will be Best Ball, after the best drive is selected, each team member must use (2) of their drives during course play.**

We need to know the foursomes as soon as possible and recommend that you call immediately for reservations, even if you do not have all the names of those in your group. Contact Bill Garvey (Cell: 781-910-9576) or Email: wgarv@aol.com.
- Dinner Only: A separate meal ticket may be purchased for those who do not play golf. Cost is \$35.00.
- Note: All courses require that we follow course rules: Proper dress code—No jeans, tank tops, bathing suits. No metal spikes. You are responsible for the golf carts you drive.
- Lunch: Dutch treat from regular luncheon menu. ARRIVE EARLY.
- Happy Hour: 6:30 PM to 7:00 PM—Dutch treat in Club House.
- Dinner: 7:00 PM - Complete roast beef dinner, beverage and dessert.
- Prizes: Prizes will be given out at check-in time for each foursome, and we want everyone to have a good time! Please support our need for donations.

Make checks payable to ASHRAE Boston Chapter

Mail to: ASHRAE Golf Outing
C/o Bill Garvey
66 Morton St
Hanson, MA 02341

Enclosed is check for \$ _____ for _____ Golf Outing, reservations, including dinner @ \$150.00 each.
_____ Dinner only reservations @ \$35.00 each

Name: _____ Address: _____

Phone: _____ Fax: _____ E-Mail: _____

HOLE SPONSORSHIPS

(\$200 EACH)

HOLE SPONSORSHIPS WIL INCLUDE A SIGN ON A HOLE

CONTEST HOLES:

(\$500 EACH)

CONTEST HOLE SPONSORSHIPS:

1. LONGEST DRIVE

HOLE SPONSORSHIP _____

CONTEST HOLE SPONSORSHIP _____

INDIVIDUAL SPONSORSHIP _____

MAKE CHECKS PAYABLE TO A.S.H.R.A.E. BOSTON CHAPTER

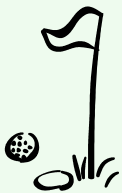
Mail to: ASHARE Golf Outing
C/o Bill Garvey
66 Morton St.
Hanson, MA 02341

NAME: _____

ADDRESS: _____

PHONE: _____

E-MAIL: _____



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and celebrates the
achievements of
ASHRAE!**



100 Grossman Drive, Suite 300
Braintree, MA 02184

www.smacnaboston.org



MEMBERSHIP PROMOTION

By: Dan Carington

As your Membership Promotion (MP) chair, please allow me to extend my sincere gratitude to all of the members who help keep ASHRAE strong! Four of those people I would like to acknowledge for having helped me with a lot of the tasks of being the MP chair; Teri Shannon, Dan Diorio, Justin Molé and Mark Persechini. They have been instrumental with helping me reach out to you, the members, to remind you of your past due membership as well as other things. If you could please take a few minutes to check your status and see if you may have missed an email or two reminding you that you are behind on your membership payment, we would greatly appreciate it.

I would also like to welcome our new members since the last newsletter went out:

Mr Benjamin Belair

Mr Dhiren Bhatia

Mr. James Patrick Donahue

Mr William Cunningham

Mr Colin Boyd

Mr Brian T Krenzer

Mr Thomas Francis Stachowski

Mr Taylor Peterson

I wanted to take a moment to welcome you to the ASHRAE Boston Chapter! It is a pleasure to have you on board; I hope to get the opportunity to meet you at one of our upcoming events, seeing last month was the last of our main meetings until our 2016-2017 seasons.

“Why do we have to pay Chapter dues”?

Although Society membership is a prerequisite to local membership, you are **NOT** obligated to join your local Boston Chapter. Your local dues are

only \$50.00 and you can pay them at the same time you pay your Society dues.

Your membership in the Boston Chapter helps support our local efforts in keeping you informed of local activities through newsletters, seminars, and meetings regarding up-to-date programs, speakers and the latest technology in the area. Positive aspects of local involvement are being able to network with other industry professionals, and maintaining your professional education by earning Continuing Education Units (CEUs) or Professional Development Hours (PDHs). By being involved, you will be a stronger contributor on the job and enhance your chances for career growth.

If you have any questions, please feel free to contact me at 617-925-8236 during the day, or via email at dpc@brplusa.com . If you find that you have not paid your dues, you can go to the ASHRAE website and pay your dues online at www.ashrae.org . Should you have any questions regarding this effort, do not hesitate to contact ASHRAE headquarters at 1-800-5ASHRAE.

Remember that PAID members have the greatest impact on the local Chapter’s financial bottom line.

Please share your experience as a member of the Boston Chapter if you can email me and tell us what ASHRAE has done for you since becoming a member. It is one of my goals to post this on 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.



RESEARCH PROMOTION

By: Dan Diorio

Thanks to the most recent contributors to this year’s RP fundraising campaign! Keep those donations coming – it’s so important. We have 3 months left to hit our goal of \$22,800. It’s a big number and we need HELP!

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. They have updated and extended the Research Strategic Plan through 2018. It’s an interesting read if you’re looking to understand what goes into ASHRAE’s Research process including fundraising, projects, and the overall purpose.

Also on the RP website this month is a link to the 7 research projects that are ready to go to bid. It’s really neat to see how the research work is bid.

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 towards 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.

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 | 635 | 810 | 600 | 100 | 865 | 950 | 75 | 4035 |

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

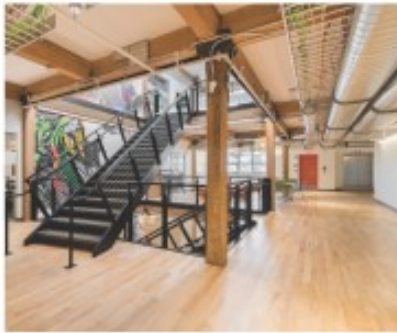
Deadline for May Newsletter: April 15, 2016

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



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ASHRAE Boston Chapter



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www.rdkengineers.com

COLLABORATIVE WORK SPACE FOR RENT

within established Boston architecture firm.

Team up with Eck MacNeely Architects. We currently have an interior designer, structural engineer and developer all sharing space – *and collaborating on projects* - with us.

For Rent: One or two adjacent work stations with access to conference room, kitchen and restrooms. Use of our printers (including wide-format) can be arranged.

Please contact Rebecca at 617.367.9696 or REBECCAA@ECKMACNEELY.COM for more information.

Eck | MacNeely Architects *inc.*
Boston, MA www.eckmacneely.com

ASHRAE BOSTON UPCOMING EVENTS

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

April Product Show

When: April 12, 2016
Where: The Lantana

May Installation of Officers

When: May 17, 2016
Where: Umbria Prime

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/>



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



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

Thanks again for a good year of student attendance at the monthly meetings. We had a noticeable showing of students each month.

Does your Student Chapter have a chapter banner to display at your meetings? Banners are available on the Student Zone tab on the ASHRAE Society website. A log-in is required:

<https://www.ashrae.org/membership--conferences/student-zone>

Reminder - As of mid-March, one student chapter has contacted me about scheduling a tour of the new 490-bed residence hall at Boston College, 2150 Commonwealth. The building will open for the fall 2016 semester and contain numerous state-of-the-art MEP systems and equipment. These tours can be scheduled at your convenience. I realize that the spring semesters can be busy for students – so we're flexible!

Another Reminder - The 2016 New Product & Energy Show, presented by the Boston Chapter of ASHRAE, takes place on April 12. I'm looking for the Student Chapters to participate. Given the typical turnout at this event (local engineers, contractors, equipment sales representatives, etc.), this is a wonderful opportunity for students to get some face-time and network with local employers. Please contact Bill Garvey (wgarvey@rdkengineers.com) ASAP for information about ways to participate!

Please contact me at any time via email at dan.diorio@bc.edu or look for me at the New Product & Energy Show on April 12.

Product Show Exhibitors

| COMPANY NAME | Booth(s) # |
|--|--------------------|
| Accuspec, Inc. | 505 |
| Air Distribution Corporation | 220 ,221 |
| Alfieri-Proctor Assoc., Inc. | 408 ,409 ,501 ,502 |
| Armacell | 104 |
| Atlantic Air Products Mfg., LLC | 511 |
| Automated Logic | 311 |
| Belimo Aircontrols | 210 |
| Boston Air Products, LLC | 316 ,317 |
| Buckley Associates, Inc. | 119 ,120 ,121 |
| Building IQ | 102 |
| Cambridgeport Air Systems | 515 |
| Carrier Corporation/Distributor Corp. | 204 |
| Conservation Solutions Corporation | 415 |
| Control Technologies, Inc. | 512 ,513 |
| DAC Sales | 114 |
| Daikin North America | 304, 305 |
| David Gooding, Inc. | 202 |
| DCNE | 205 |
| dPoint Technologies | 306 |
| Duct & Vent Cleaning of America, Inc. | 103 |
| Emerson-Swan, Inc. | 214, 215 , 216 |
| ENE Systems, Inc. | 509 ,510 |
| Envirotech Clean Air, Inc. | 406 |
| Equipment Direct Sales, Inc. | 110, 111 |
| F.W. Webb | 506 |
| FIA, Inc. | 308 |
| Filter Sales & Service, Inc. | 201 |
| Flow Elements / Bray Commercial | 203 |
| Fluid Equipment Solutions of N.E., LLC | 412 |
| Fluid Transfer Products, Inc. | 302, 303 |
| FMC Technologies, Inc. | 116 |
| Frank I. Rounds Company | 112, 113 |
| Houghton Chemical | 405 |
| HTS Engineering, Inc. | 401 , 402 |
| J.S. Fleming Associates, Inc. | 122 |
| Johnson Controls, Inc. | 407 |
| Kirschner Associates, Inc. | 106 , 107 |

Product Show Exhibitors (continued)

| COMPANY NAME | Booth(s) # |
|---|---------------------|
| Leasing Associates, Inc | 604 |
| Leonhardt Company, Inc. | 507, 508 |
| Little, Inc. | 413 |
| M.A. Selmon Co, Inc. | 217 |
| Martin Engineering Co., Inc. | 315 |
| Mitsubishi Electric | 218 |
| Molecular Systems of New England, Inc. | 318 |
| New England Applied Products | 517 |
| New England Combustion Products, Inc. | 320 , 321 |
| Northeast Air Solutions, Inc. | 101 |
| Northeastern Sheet Metal, Inc. | 503 |
| Onset | 118 |
| Preferred Utilities Manufacturing Corp. | 514 |
| Process & Energy Measurements Corp. | 319 |
| R. L. Stone Co., Inc | 105 |
| R.T. Forbes Company, Inc. | 403 |
| Righter Group, Inc. | 404 |
| RST Thermal | 212 ,213 ,301 |
| S.J. Ginns Associates, Inc. | 605 |
| Siemens Industry, Inc. -Building Tech. Division | 108 ,109 |
| Skinner Associates, Inc. | 309 , 310 |
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By: Steve Rosen

ASHRAE Government Affairs Update, 3/18/2016

As of July 1 2015 GGAC changed from Grassroots Government Activities Committee to Grassroots Government Advocacy Committee.

Federal Activities

ASHRAE Vice President Presents at Congressional Briefing on Building Energy Codes & Benchmarking, Holds Meetings on Capitol Hill

Although building energy codes are key elements of the built environment in which we all live, Members of Congress and their staff often lack a basic understanding of how they are developed, adopted, implemented, and enforced. To help solve this problem, ASHRAE Vice President Chuck Gulledge recently spoke at a Congressional briefing entitled “The Role of Benchmarking, Transparency and Codes in Driving a More Efficient Built Environment”. Hosted by the Alliance to Save Energy (of which ASHRAE is an Associate Member), this briefing featured two panels of experts in building energy benchmarking, codes, and standards from private companies, the District of Columbia, the federal government, ASHRAE, and other nonprofit organizations. US Representative Paul Tonko (D-NY-20) provided keynote remarks, lending his perspective both as a Member of Congress and the former President and CEO of the New York State Energy Research and Development Authority (NYSERDA). While on Capitol Hill, Vice President Gulledge also took the opportunity to meet with staff and Members of Congress from New York and his home state of North Carolina, during which he discussed a number of issues including: energy legislation, high performance green buildings, model standards, and benchmarking.

GGAC Regional and Chapter Activities

Researchers Convert Industrial Emissions Into Fuel
 CAMBRIDGE, Mass.—The emissions of power stations, steel mills and garbage dumps have successfully been converted into liquid fuels in recent trials. MIT researchers demonstrated the process, which uses engineered microbes, at a pilot plant in China. The process uses bacteria to convert the waste gases into acetic acid—vinegar—then an engineered yeast to produce an oil. MIT plans to test its process at a "semi-commercial" plant 20 times larger than the one it used

for the trial. Private companies are seeking to expand the process—using licensed MIT patents—into commercial use.

U.S. Army, Private Company Team on Refrigeration, Energy Recovery System

NATICK, Mass.—The U.S. Army Natick Soldier Systems Center (NSSC) has awarded S-RAM Dynamics a \$1 million contract to build and test a mobile refrigeration system demonstration prototype using the new S-RAM energy recovery compressor that uses carbon dioxide as a refrigerant. The CO₂ refrigeration system is expected to reduce energy consumption of the Army's mobile refrigeration assets by more than 50%. The energy recovery compressor integrates an axial piston compressor with an opposed axial piston expander to recapture normally lost energy and boost system performance. The system will be installed on the Army's new Multi-Temperature Refrigerated Container System (MTRCS), a mobile, multi-temperature refrigeration system that will provide the capability for transportation and storage of frozen, chilled, or semi-perishable ration components simultaneously on a single platform. It also will be used as an external heat recovery engine to generate power as well as an axial internal combustion engine for unmanned systems, such as drones.

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
- srosen@RDKEngineers.com

Installation of Officers for 2016-2017

Umbria Prime

295 Franklin St.
Boston, MA 02110

Tuesday, May 17th 2016

5:30 to 9:00 pm

Please come and celebrate another successful year with the Boston ASHRAE Chapter!

This event is to show our appreciation and support for all who've served our Boston chapter during the 2015-2016 fiscal year. We will also be inducting the new officers for the 2016-2017 fiscal year.

Passed hors d'oeuvres will be available.

All members are welcome and please bring non-members as well to show them what ASHRAE Boston is all about!

Cost to attend:

Members: \$50

Non-members: \$60

Parking is available in the Garage at Post Office Square for \$9





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: March 8, 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 February 2016.

2015/2016 Schedule

Discussion of our March technical session and main program were approved for 1 PDH credit. Had an in-depth discussion on the benefits of having the 3 meetings at the Metro Meeting Centers in Boston, located at 101 Federal St.

Discussion on the Product and Energy Show with remaining 12 booths and 3 trailers remain to be sold. Our Chair discussed the Roster and Product Guide's formatting on the webpage. Jack's Abby Brewery tour is off the table; new plans are being made to do the tour back at last year's location of the Night Shift.

Additional Miscellaneous Items Discussed

The following topics were briefly discussed:

Employer Recognition – Discussed the top 10 companies that participate at ASHRAE Boston meetings and will be recognize at the Officers installation and also posted on our Boston Chapter's webpage.

Update Corporate Sponsorship / Cocktail sponsorships – Our cocktail hour sponsorship for the night was by Equipment Direct Sales.

Appreciation event for sponsors – Proposed doing event at the Post 390, 406 Stuart St, Boston on April 14th, to recognize all our sponsors this year.

Installation of Officers event – Event will be at Umbria Prime, 295 Franklin St, downtown Boston, on May 12th.



By: Mike Gilroy

U.S. Army Awards S-RAM Dynamics a Research Contract for Next Generation CO₂ Refrigeration System

The U.S. Army Natick Soldier Systems Center (NSSC) has awarded S-RAM Dynamics a Small Business Independent Research (SBIR) Phase 2 contract for \$1 million to build and test a mobile refrigeration system demonstration prototype using the new S-RAM energy recovery compressor that utilizes the natural refrigerant carbon dioxide (CO₂). The next generation CO₂ refrigeration system will reduce energy consumption of the Army's mobile refrigeration assets in excess of 50 percent, decreasing fuel consumption for forward operating bases without using synthetic refrigerants. The mobile CO₂ demonstration refrigeration system will be installed on the Army's Multi-Temperature Refrigerated Container System (MTRCS).

The high-performance S-RAM CO₂ energy recovery compressor is the enabling technology that makes HVAC, refrigeration and heat pump systems significantly more efficient and climate friendly. The heavily patented energy recovery compressor integrates an axial piston compressor with an opposed axial piston expander to recapture normally lost energy and boost system performance. The energy recovery compressor will be applicable to the millions of refrigerated transport containers that travel road and rail across the nation and world, as well as millions of stationary refrigeration units. This technology is also being used for an external heat recovery engine to generate power as well as an axial internal combustion engine for unmanned systems, such as drones. The S-RAM CO₂ energy recovery compressor will be manufactured in Tennessee.

"We are pleased the Army recognized the impact of our proprietary CO₂ compressor and expander technology to reduce energy consumption while

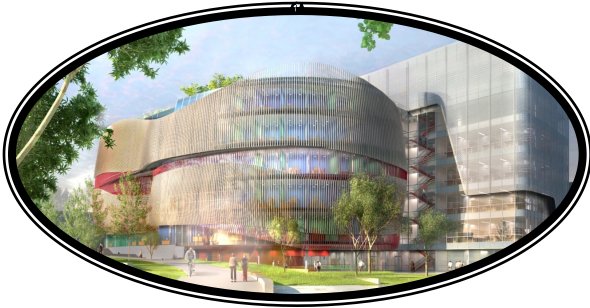
eliminating harmful greenhouse gas emissions," said S-RAM President Lee Jestings. "This demonstration contract will help accelerate our commercialization efforts for a broad range of refrigeration and heat pump products."

The S-RAM compressor technology is being developed with the assistance of Purdue University at the Ray W. Herrick laboratories, led by world-renowned compressor expert Professor Eckhard Groll.

"We're excited to be part of testing S-RAM's technology and to assist S-RAM with commercializing the energy recovery compressor along with the mobile CO₂ refrigeration system," said Dr. Groll, Reilly Professor of Mechanical Engineering at Purdue University. "This cutting-edge technology has the potential of setting a new standard for innovative clean tech products."



In March we had our 2nd annual Cornhole Tournament at Baseball Tavern, always a well-attended event we look forward to catching up and meeting new faces! Continue to keep in touch on our Facebook page where we will post photos of the event!



In May we will be going on a technical tour of the Northeastern University Interdisciplinary Science & Engineering Complex. The building was designed by Payette and is pursuing LEED certification. The building is a six-story facility with both lab and shared learning spaces. Suffolk construction will be leading the tour. Save the date May 19th.

We are excited to have had the year start and end with Technical Tours this year, if you have ideas for next year, post them on our facebook page or e-mail bostonyea@gmail.com

We hope to see YEA members in April at the Installation of Officers.

ASHRAE Funds 24 Undergraduate Projects; Aerial Vehicle for Energy Audits

ATLANTA – Engineers will get a bird’s eye view of the energy use of building envelopes under a project funded through an ASHRAE Undergraduate Senior Project Grant.

This year, 24 schools from around the world were awarded grants. The grants, totaling some \$110,000, are awarded by ASHRAE to colleges and universities worldwide to promote the study and teaching of HVAC&R, encouraging senior undergraduate students to pursue related careers.

The grants are used to design and construct projects, such as The University of Alabama’s proposal to use an unmanned aerial vehicle to document building energy audits. The project notes that while building audits are a key process for determining building efficiency, performance and faults, audits require knowledge of the internal building and energy system and the external building envelope, which can present a challenge.

“The vehicle would be used to quantify envelope characteristics of hard-to-reach and large regions on modern buildings,” Zheng O’Neill, Ph.D., of the Mechanical Engineering Department and advisor of the project, said. “The information will provide engineers with systematically measured control volume characteristics. For example, infrared thermal camera data will provide information of building envelope temperature, which can be used for building infiltration diagnostics.”

She will work with Charles O’Neill of the Aerospace Engineering and Mechanics Department for the vehicle development and flight tests.

The goal of the project is to build a co-robot (human controlled with robotic assistance) quadcopter with onboard sensors including infrared temperature camera, visible light camera, heat flux sensors, direct temperature probes and location and orientation.

Other ASHRAE grant recipients are:

- Ryerson University, Toronto, Ontario, Design and Prototyping of a Heat Transfer Enhanced Hybrid Air Based Building Integrated Solar Photovoltaic/Thermal Collector for Net Zero Energy Building Applications
- Sinclair Community College, Dayton, Ohio, Chiller Control Training Boards
- Lamar University, Beaumont, Texas, A Laboratory System for Evaluating Cooling Systems in Consumer Electronic Devices
- University of Windsor (Ontario), A Novel Membrane Absorption Heat Pump
- University of Oregon, Eugene, Campus Audit Squads for Energy (CASE) Studies
- Carleton University, Ottawa, Ontario, Evaluation of Office-Level Energy Consumption Using a Sparse Sensor Network
- University of Alabama at Birmingham, Cooling and Electricity from Renewable Compressed Air
- Purdue University, West Lafayette, Ind., HVAC Heat Transfer Experiment and Modelling
- De La Salle University-Manila, Design, Fabrication and Testing of a Laboratory Set-up of an Aqua-Ammonia Absorption System
- University of Santo Tomas, Manila, Philippines, Development of an Ice Storage Air Conditioning System as Laboratory Equipment for Engineer Students of University of Santo Tomas
- Southern Illinois University, Carbondale, Solar Energy PCM Storage combined with Solar-Powered Water Purification
- The University of Texas at Tyler, Auto Self-Balanced Zoning System

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

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- The University of Texas at Tyler, Phase II – TxAIRE House 2 Ground Source Heat Pump
- Capital University of Science and Technology Islamabad, Islamabad, Pakistan, Design and Fabrication of a Heat Pump
- Mapúa Institute of Technology, Manila, Philippines, Improvement of An Indoor Environmental Quality Laboratory
- Mapúa Institute of Technology, Manila, Philippines, Development of a Laboratory Set-Up of a Geothermal Air-Conditioning System
- Texas A&M University - Kingsville, Development of a Miniature HVAC System on Wheel for Classroom Application
- North Carolina A&T State University, Greensboro, N.C., Integrated Variable Air Volume and Terminal VAV Box Control with BACnet DDC, Matlab-Based Monitoring, and Simulation Systems
- The University of Alabama, Tuscaloosa, Building Energy Audits Using Unmanned Aerial Vehicles
- Sinclair Community College, Dayton, Ohio, Development of a Ground Source Heat Pump Simulator
- D Y Patil, Maharashtra, India, Performance Analysis of PTC based Solar Powered Solid Adsorption Refrigeration System
- Montana State University, Bozeman, Radiant Panel Design Set
- University of Algarve, Faro, Portugal, Development of a Clean Technology Applied in the Air Treatment and Energy Production
- Mississippi State University, Smart Building Wireless Sensor Network

For more information on the grant program, visit www.ashrae.org/grants. ASHRAE will begin

accepting applications for the 2016-17 program in August 2016, with a December 2016 final deadline.

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.

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

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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/ | Speaker | PDH | Meeting Manager | Location/ |
|--|---|--|----------------|--|---|
| 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, Waltham 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 17, 2016 | Installation of Officers | William Tang | N/A | Event Committee/WT | Umbria Prime Chapter Appreciation Night |
| June Monday June 6, 2016 | Golf Outing | William Garvey | N/A | Golf Committee | Halifax Country Club, Halifax, MA |

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