ASHRAE Boston Chapter

NorthEastAire

ASHRAE - American Society of Heating, Refrigerating and Air-Conditioning Engineers

XLIX No.8 | April 2017 | Editor: Deanna Adkison 617-535-8236

2016-2017 Officers

William Tang
President

Mike Gilroy
President-Elect

Dan Carington
Vice President

Mark Leonard
Secretary

Deanna Adkison
Treasurer

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April Meeting

Tuesday April 11, 2017

Main Meeting:

Standard 100

Tech Session:

Open Discussion—Attract, Retain & Promote Women in the HVAC Industry

Student Activities/YEA/WiA Night

Please see **page 3** for more information.

Where:

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

Meal:

Buffet

Time:

4:30 – 6:45PM	Registration/Social Hour (Sponsored Beer & Wine Reception)
5:00 - 6:00PM	Technical Session
5:30 - 6:45PM	Buffet Dinner
6:45 - 8:00PM	Main Program + Dessert & Coffee

Cost:

ASHRAE Boston Members:	$50
Non-ASHRAE Boston Members:	$60
ASHRAE Student Members with RSVP:	Free

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

Special thanks to our Sponsors:

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Event Sponsors:

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Please register online at www.ashraeboston.org.
RSVP by 12:00 PM on Friday, April 7th.
If you have any questions, you may contact Christopher Pietrocarlo, Attendance Chair, at ashraebostonattandance@outlook.com.
Thank You

PRESIDENT'S MESSAGE

By: William Tang

March was a busy month for the Boston Chapter. We had our annual joint meeting with AEE New England on March 1st. We also had our second Annual Social at The Kinsale after postponing due to inclement weather. I was pleased that we had a great turn out and I was happy to have seen many new faces. Next year, we will try to hold the Annual Social in October. It will give our members a chance to meet the new volunteers who help run the Chapter at the beginning of the season and to space our social events somewhat apart.

April will be a busy month for the Chapter as well. We are honored to have Ginger Scoggins, ASHRAE Society Vice President, to speak at our meeting on April 11th. We will try out the new name tag system at this meeting, and we are eager to hear your feedback. On April 26th, we will have our annual brewery tour at Night Shift Brewery. Please join us at both of these events!

Last year was the first year we implemented electronic ballots for our members to vote for their Chapter officers and Board of Governors members. We received a much higher response rate than the traditional method. This year, we will continue online voting as well as revive the mail-in method. Please review the candidates, responsibilities of each position, and the instructions on how to submit your votes in the ballot section of this newsletter.

Lastly, the Boston Chapter rolled out event registration and payment several years ago. This online registration process has made things easier for our members as well as our volunteers. We understand unexpected circumstances can prevent people from attending the event they registered for; however, there is a cost per person to the Chapter for each event. This ASHRAE season to date the Chapter has incurred a loss of approximately one thousand dollars due to members who registered with the "invoice me" option but did not to attend. Starting September 2017, the Chapter will remove the "invoice me" option in an effort to minimize this loss. If you are unable to attend a registered event, please notify our attendance chair in advance. Thank you for your cooperation.

Please feel free to contact me at c001@ashrae.net or any of the volunteers with any questions or concerns with regards to ASHRAE Boston Chapter.

EDITOR'S NOTE

By: Deanna Adkison

Materials for the May newsletter are due by **April 14, 2017**.

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

April Meeting Information

Main Section Title of presentation: ASHRAE Standard 100-2015 (1 PDH)

Presentation Outline

- Purpose of Standard 100
- Compliance Path of Standard 100
- Annex categories
- Q&A
- Wrap Up

Tech Section Title of presentation: Open Discussion—Attract, Retain & Promote Women in the HVAC Industry

Presentation Outline

Ginger expresses the importance of attracting, retaining and promoting women in the HVAC industry, with feedback from both the speaker and the audience.

Speaker Bio: M. Ginger Scoggins, PE, CxA, CEM, LEED-AP

M. Ginger Scoggins, PE, CxA, CEM, LEED AP is the President of Engineered Designs, Inc., a full-service plumbing, HVAC, and electrical design firm in Raleigh, NC. She is a licensed mechanical engineer with 30 years of experience in the design and construction of a variety of building types. Her focus during her career has been on providing state-of-the-art HVAC systems design that focus on pushing the envelope on energy conservation, addressing and exceeding the requirements of the current energy standards.

In addition, she is a long-standing member of American Society of Heating, Refrigeration, and Air-Conditioning Engineers (ASHRAE) which works to promote a sustainable world. She has served in numerous positions and chaired several committees in the ASHRAE organization, as well as having presented technical sessions on sustainable design and energy modeling using ASHRAE Standard 90.1 Energy Standards for Buildings Except Low-Rise Residential Buildings. Currently, Ms. Scoggins is an ASHRAE Society Vice-President, serving thru-out the society as needed to promote membership and growth in technology.

Additional Information:

- RSVP by 12:00pm (noon) Friday, April 7th, 2017.
- When you register, please indicate if you wish to attend the Tech Session as well as the Main Dinner Meeting
- Please indicated if you wish to receive certificate(s) for Professional Development Hour
- If you would like a vegetarian meal, please check box in registration form
- Please register online whether pre-paying with credit card / PayPal or paying with cash/check at the meeting.

2017 ASHRAE Boston Chapter Ballot

The ASHRAE Boston Chapter website provides the ballot and supporting materials for the 2017 ASHRAE Boston Chapter Membership Ballot. You will be voting on the election of Officers and Board of Governors (BOG).
The ballot has been distributed, either electronically or by email notice, to all voting members.

Please note, Michael P. Gilroy was elected President-Elect per last year's voting poll by Boston Chapter Members and, pursuant to the ASHRAE Bylaws, will automatically become President at the 2017 Installation of Officers Meeting (Term July 2017 - June 2018). Similarly, Deanna Adkison was elected to serve the minimum two (2), maximum four (4) year term as Treasurer, thus, will automatically serve as such for the Term noted above.

On the following page, check the name of each nominee for officer or BOG for whom you wish your vote to be cast. Or, enter the name of any eligible member for whom you wish your vote to be cast if such name does not appear on the ballot. Please take time to review the biographies for all candidates.

Voting results will be announced in the May newsletter and newly elected officers and BOG will be installed at the Installation of Officers Meeting in May 2017.

Thank you for your vote and your support of ASHRAE.
William K. Tang, 2016-2017 President
Mark C. Leonard, 2016-2017 Secretary

Official Ballot

To vote for a candidate, check the box next to the candidate's name.

Upon completing the ballot, please send it to:

RDK Engineers
Seaport Center
70 Fargo Street, Suite 800
Boston MA 02210
Attn: Robert Persechini
rpersechini@rdkengineers.com

Alternatively, please visit the ASHRAE Boston Chapter website for a link to Surveymonkey.com to complete an electronic ballot.

Officer Responsibilities

President

1) Overseeing the conduct and supervision of all activities of the chapter during his or her term of office.
2) Presiding at all meetings of the chapter and of the chapter's Board of Governors (BOG).
3) Developing a calendar of events for the chapter operating year.
4) Attending the CRC.
5) Chairing CRC preparation committee by:
    A. Developing motions
    B. Preparing the chapter CRC report
    C. Proposing region and Society officer
6) Candidates and award recommendations
7) Leading the chapter's strategic planning.
8) Disseminating information from region and Society to the chapter.
9) Preparing meeting agendas, assuring that all meetings start and end on time, and accomplishing scheduled events.

10) Delegating and coordinating duties for relevant chapter activities to individuals and committees.
11) Stimulating and maintaining enthusiasm among chapter members.

President-Elect

1) Assuming the next highest position in the event it becomes temporarily or permanently vacant.
2) Serving on the chapter's BOG.
3) Assuming other duties assigned to them by the chapter President or the BOG.
4) Attending President-Elect training.
5) Attending the CRC.
6) Additional duties of the President-Elect typically include appointing committee chairs who will serve during his/her Presidential year.

Secretary

1) Taking minutes for chapter and BOG meetings.
2) Serving on the BOG
3) Maintaining chapter records
4) Serving as liaison between the chapter and Society Headquarters.
5) Being familiar with "Roberts Rules of Order (Revised)" for conducting business sessions.
6) Maintaining a record of each member's attendance and chapter activities for use of the Nominating Committee.
7) Sending minutes of chapter and BOG meetings to the Director and Regional Chair (DRC) and the Regional Vice Chair (RVC) of Chapter Technology Transfer (where applicable) within three weeks of each meeting.
8) F. Keeping lists of members and prospective members up to date, in cooperation with the Membership Promotion Committee, and certifying to the BOG that all chapter members are bona fide members of the Society.
9) Obtaining and distributing forms, supplies, etc., as needed.
10) Acting for the BOG in taking charge of all property of the chapter, such as the charter, bylaws, banners, projectors, etc.
11) Arranging for distribution of meeting notices.
12) Promptly notifying officers, nominated candidates and members of all committees of their selection, nomination or appointment.
13) Completing the online Chapter Information Questionnaire (CIQ) on the ASHRAE website and sending it to the DRC, Assistant Regional Chair (ARC), Regional Members Council Representative (RMCR), and RVCs.
14) Preparing a chapter roster. (See Section 7.7 for information about accessing and running chapter Reports.)
15) Ensuring that the DRC receives copies of appropriate chapter communications and documentation.
16) Performing other functions as outlined in subsequent parts of this manual or as assigned by the President or BOG.

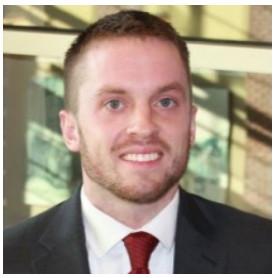
Treasurer

1) Receiving, keeping safe and disbursing chapter funds
2) Maintaining records, submitting reports and making tax filings in accordance with Section 5 of the MCO.
3) Keeping chapter expenditures in line with income.
4) Attending CRC training.
5) Collecting chapter dues from Society, if the chapter chooses to have Society accept them.
6) Paying regional dues assessments.
7) Coordinating with Society staff to ensure that the chapter is registered as an official “fundraiser” in each state in which it solicits funds.
8) Appendix 1C provides a suggested format for a report from an independent accountant.
9) Appendix 1D details a recommended Treasurer timeline and duties.
10) The Board of Governors (BOG) typically consists of the chapter's elected officers, the most recent past president and other members elected by the membership. The BOG’s responsibilities typically include:
    A. Managing and conducting the affairs of the chapter.

B. Supervising and caring for all property of the chapter.
C. Presenting to the members at the annual meeting a general statement on the work of the year and the condition of the chapter.
D. Meeting monthly, at a time that does not conflict with other chapter activities.
E. Showing appreciation for chapter members' efforts by awarding certificates of appreciation, past presidents' pins and other forms of recognition; encouraging chapters to express appreciation to their leadership at annual meetings or other special events.

Officer Candidate Biographies

President



Michael Gilroy, PE, LEED AP BD+C is a HVAC Engineer at BR+A Consulting Engineers, LLC. Michael is a 2011 graduate of Penn State University with a Bachelor and Masters in Architectural Engineering. He joined ASHRAE as a student member in 2009 and is currently an Associate member.

Michael served as the attendance chair for the ASHRAE Boston Chapter from 2012-2013, Chapter Technology Transfer Committee Chair, and Board of Governors. He has also acted as Secretary from 2014-2015, Vice President from 2015-2016, and President Elect from 2016-2017. Michael looks forward to the upcoming year of ASHRAE Boston Chapter when he will serve as President.

President-Elect

Daniel Carington, LEED AP BD+C is a HVAC Engineer at BR+A Consulting Engineers, LLC and has been with the company since 1990. Daniel is a 2001 graduate from Wentworth Institute of Technology with a Bachelor of Science in Design Engineering, earned his LEED Accreditation in 2012. He joined ASHRAE in February of 1994 as an Associate member and became a Member in November of 2002.

Daniel served as the Student Activities Chairman from 2003-2004, Membership Promotion Co-Chair 2013. Daniel is currently serving as Membership Promotion Chair 2014-2016, Chapter Secretary for 2015-2016, and on the ASHRAE Boston Chapter Board of Governors 2014-2016.

Vice President

Mark Leonard, PE, LEED AP BD+C is an Associate at BR+A Consulting Engineers, LLC. Mark is a 2010 graduate of the University of Massachusetts Amherst with a Bachelor's Degree in Mechanical Engineering.
He joined the Boston ASHRAE Chapter as an Associate member in 2010. Mark served as the Publicity Chair for the Boston Chapter of ASHRAE from 2013-2015, the Program Manager Chair from 2015-2016, and the Chapter Secretary from 2016-2017. Mark has also served a three year term on the Board of Governors.

Secretary

Christine Reinders is an Associate Mechanical Engineer and Office Sustainability Leader at CannonDesign in Boston. She is an ASHRAE Associate member and serves on the Grassroots Government Activities committee in Boston, a member of the Women in ASHRAE Ad Hoc committee, and past chair of YEA Boston. As a YEA member Christine participated in the ASHRAE YEA Leadership weekend and the ASHRAE design essentials course at ASHRAE headquarters. At the society level Christine is a voting member of TC 7.6 Building Energy Performance and corresponding member of TC 9.10 Laboratory Systems. Christine serves as a liaison between ASHRAE's Building Energy Performance TC and the Advanced Energy Design Guide Steering Committee, a collaboration between ASHRAE, IES, AIA, and USGBC. She participated in Leadership U shadowing society vice president Jim Vallort at the summer 2015 meeting.

Treasurer

Deanna Adkison, EIT, LEED Green Associate is an engineer at AKF where she is valued for her hard work and expertise at producing high quality documents. Deanna graduated with a bachelor's degree in Mechanical Engineering from University of Massachusetts—Lowell.
As well as treasurer, Deanna has been the ASHRAE Boston Chapter newsletter editor since the 2015 -2016 year and is the chair for the Women in ASHRAE committee, which she helped to start during the 2015-2016 year. She will continue these roles and aims for success during the 2016-2017 year.

Policy Statement: *The office shall seek the person, rather than the person seek the office.* This is the policy that governs the nomination for Boston Chapter office, and is the reason only one name appears on the ballot for each position to be filled. It is recognized that the strength of the Boston Chapter depends upon the quality of its leadership. The Nominating Committee, representative of Boston Chapter Members, selects those nominees who it believes can best serve the interests of the Chapter. If a substantial group of members feels that other persons should be considered, they can make additional nominations as provided in the Bylaws.
This policy statement shall appear on all ballots for officers and members of the Board of Directors. (61-02-12-47/72-06-24-05)

Please send the ballot to:

RDK Engineers
Seaport Center
70 Fargo Street, Suite 800
Boston MA 02210
Attn: Robert Persechini
rpersechini@rdkengineers.com

President-Elect
Select 1 from below. 1 of 1 selected.

- ☐ Dan Carington
- ☐ Write-in (other than above)

_____

Board of Governors (Term 2017-2020)
Select 1 from below.

- ☐ Lance Brown
- ☐ Write-in (other than above)

_____

Vice President
Select 1 from below. 1 of 1 selected.

- ☐ Mark Leonard
- ☐ Write-in (other than above)

_____

Board of Governors (Term 2017-2020)
Select 1 from below.

- ☐ Robert Persechini
- ☐ Write-in (other than above)

_____

Secretary
Select 1 from below. 1 of 1 selected.

- ☐ Christine Reinders
- ☐ Write-in (other than above)

_____

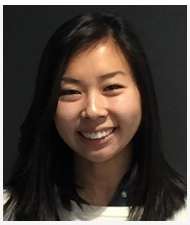
Board of Governors (Term 2017-2020)
Select 1 from below.

- ☐ Christopher Pietrocarlo
- ☐ Write-in (other than above)

_____

Board of Governors (Term 2017-2020)
Automatically elected to BOG as a Past-President

- ☑ William Tang



STUDENT ACTIVITIES

By: Yuka Narisako

Greetings! I am looking forward to seeing a high participation rate of student members at the upcoming Student Night meeting on April 11. Some students have reached out to me regarding summer internships and scholarships and I am thrilled that so many students are taking advantage of what the ASHRAE Boston Chapter has to offer. Again, ASHRAE's employment page posts employment positions available, both full time and internships, and I highly encourage our Student Members to check it out at http://jobs.ashrae.org/.

The Northeastern University Student Branch members will be participating in the U.S. Department of Energy Race to Zero Student Design Competition. The Northeastern University Student Team is the only team participating from Massachusetts this year. The team is looking for corporate sponsors to cover costs to travel to Golden, CO from April 22-23 for the national design competition. Please reach out to Zhenyu Xue at xue.zhe@husky.neu.edu if interested in sponsoring the Northeastern University team at this competition! It is incredibly refreshing to see such a motivated team of students in our field!

In addition, I highly encourage our high school student members as well as college/university underclassmen to apply for our Cheryl Rossini Future Engineers Scholarship. Please go to https://ashraeboston30.wildapricot.org/scholarshipinformation for more information.

Please feel free to reach out to me at c001sa@ashrae.net with any questions you might have.

Presidential Award of Excellence

Boston Chapter - 2016-2017

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
1052	1245	710	820	540	895	900	550	5660

Employment Ads

Wentworth Institute of Technology

College of Professional and Continuing Education

Continuing Education Spring Open House - 04/08/2017

What: Continuing Education Spring Open House

When: Saturday April 8, 2017 - 10:00am to 1:00pm

Where: Ira Allen Lobby

The College of Professional and Continuing Education **invites you to attend our Spring Open House on** Saturday, April 8th, 2017 **from** 10:00am - 1:00pm**. This is a great opportunity to learn about the wide variety of programs Wentworth has to offer. Join us for refreshments and talk with faculty, staff, alumni, and current students. Representatives from the following departments will be available to answer questions as well:**

- **Admissions**
- **Career Services**
- **Financial Aid**

Your $50 application fee will be waived for attending, so be sure to hit the RSVP button ***and reserve your spot!***

Contact Information

cpce@wit.edu

617-989-4300

HISTORICAL NEWS

By: Eric Edman

Some of you may recall in past newsletters, we had a great suggestion from one of the general members to do an article on the history of a product that was developed right here in Massachusetts. We believed this was a great suggestion! Your historical committee set to work immediately to interview the product inventor in person, and write about this for your reading pleasure.

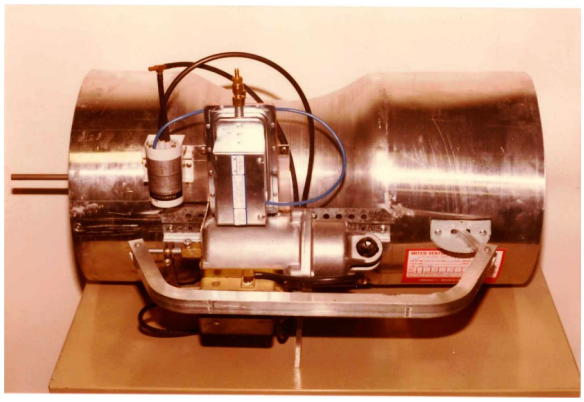
We hope you enjoy this special feature as much as we enjoyed writing about it. There are some interesting twists, and turns, in the process of developing a product, and, creating a world class company.
If any of you have creative thoughts, or suggestions on historical related items, please share these with us.

We always look forward to seeing you at our monthly meetings.

Eric

History of Phoenix Controls Company, and the Phoenix Venturi Air Valve

As it is with most products and inventions, things never start off - or turn out as intended. The journey towards an invention and its development can sometimes lead to some very interesting discoveries. As a young engineer, I was always intrigued in just how does a product go from an idea into a product that works in the HVAC marketplace. The story of one such device follows;



The founder graduated from MIT with a BSEE and MSEE and an interest in power electronics. At the time, in the early 1980's the variable frequency drive (VFD) or motor speed controller as we know it today was in its infancy. Mr. Sharp had started the IMEC company which had developed an early version of a VFD, he named this the Phoenix drive. It was a unique VFD- in that it could "catch" a motor still in rotation after a short power outage while other VFD's would shut down or “trip” after one of these commonly occurring short power outages. This ability to always “catch the rotating motor” after a power glitch was why it was called the Phoenix VFD -like the mythical bird that would be reborn and arise out of its ashes. However, the Phoenix drive was limited in motor size to only 1.5 horsepower. This made it challenging to find a useful market for a VFD this small of motor size. Sales were needed to keep the IMEC company going.

Being from MIT, Mr. Sharp decided to talk with some of the facilities people there to do some market research. He asked if there was an application for something like his small IMEC/Phoenix VFD. To his surprise, they indicated that on campus they had a chemistry building with lots of laboratory fume hoods connected to small single exhaust fans with VFD’s controlling them. All aspects of motor size and application suited the IMEC/Phoenix VFD perfectly to make a great beta site, and potential useful market application. To help usher product development along, MIT was having problems with the existing VFD systems going off line after power loss/ system failure. The IMEC/Phoenix VFD product might just correct a whole host of problems. (For a time, this problem was so severe that facilities staff were stationed on the roof 24/7 to reset any VFD’s that shutdown due to power outages/system failures) Well, they tried a prototype, and it worked fairly well.

Continuing to work with MIT Environment Health and Safety staff over the next year, the team refined the IMEC VFD application by experimenting and developing a way to maintain a constant fume hood face air velocity by first tracking the fume hood sash position with a “sash sensor”. The exhaust fan motor’s speed and fume hood exhaust air flow was then quickly, and linearly, varied to both save energy- yet maintain hood safety and capture efficiency.

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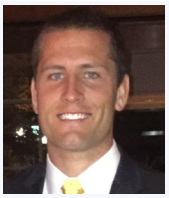
Along came the mid 80's, newer HVAC designs for laboratories were moving towards a manifolded fume hood exhaust system using a larger fan system connected to many fume hoods and general room exhausts. For these systems, a single small horsepower drive (the IMEC limit was 1.5 hp) was not appropriate to control each fume hood or lab room's airflow, instead, some sort of a linear controlled damper or air flow control device was needed. At this point, the IMEC VFD was losing market to other VFD's. A new product was needed to control critical lab air flows. One of the early IMEC reps from Iowa had suggested looking into a product that was more than a damper - it was the MITCO venturi valve made in here in Massachusetts. The early concept new product started to take shape. A pressure independent, non-linear air flow control device with faster speed of response was born. One could even figure out position and with it linearize the flow to the input flow command. All the other product components were starting to come together. There was also the need to start up a new company as IMEC was being sold to another investor who was not interested in the lab airflow controls business. Looking to somehow utilize the only tradename he owned (the Phoenix drive), the "Phoenix Controls Company" was born in late 1985. IMEC was sold shortly afterwards.

Remember how we mentioned at the start of this article with a statement that inventions had courses and directions which were altered. Well, the IMEC/Phoenix VFD -the original namesake of the company, ended up taking a back seat and was eventually rendered obsolete. Other companies had developed new VFD's with equal, or better capabilities, while the Phoenix Controls Company (newly born) pursued buying MITCO venturi valves and rebuilding them with components to work in fume hood exhaust and lab supply air applications. Teflon coated parts, electronic controls and other components were added to make a more robust, and reliable- Phoenix Controls Company product. One day in the late 1980's, unannounced, the MITCO company suddenly went out of business. It was a defining event that finally moved (pushed) Phoenix Controls into being a true airflow controls valve supplier that made or controlled the manufacturing of all of its components. This ultimately led to a much-improved overall product. The Phoenix Controls Company has continued to do well and has continued with product enhancement with further developments thru the 1990's and 2000's. It was acquired by the Honeywell Corporation, and has relocated out of Newton, MA to Acton, MA.

Today the brand is known the world over as one of the foremost lab airflow controls companies.
During those early days in the 1980's it was perseverance, hard work, and some luck mixing together to create a company that really changed the marketplace for lab airflow control systems. Thru all of these eventful beginnings, the company has taken challenges to make opportunities. The market has had huge benefits in lab safety, device speed of response, energy savings and reliability.

Good people almost always succeed. This is one such success story.

About the Phoenix Controls founder:
Gordon Sharp was born and raised in Rochester, NY. He obtained his undergraduate degree at MIT and worked at Draper Labs in Cambridge, MA, while getting his graduate degree from MIT. He worked on fast responding servo controls for induction motors much like you see in today's electric cars (He drives a Tesla). He lives in Newton, MA with his wife, and has 4 children all residing in New England.
Data gathered for this article is from an interview. The product was developed in Massachusetts.



Webmaster's Notes

By: Kevin Doty

Visit the "Events" tab on the website to see all of our upcoming events. Online payment for event registration is preferred, but cash & checks are still accepted at the door.

Please make sure to add admin@ashraeboston.org to your "safe sender" list to prevent emails from going to your spam folder.

Please send comments and suggestions to c001web@ashrae.net

BOG Meeting Minutes

By: Mark Leonard

Meeting started at 4:30 PM

General Business
February meeting minutes were approved.
ABC discussed current outstanding registration fee invoices.
ABC will be holding this year's brewery tour at Night Shift on Wednesday, April 26th from 5:30-8:30 PM.
Event will be limited to 100 people.
ABC will host a private Corporate Sponsor Appreciation Event in March for the thirteen (13) generous companies who helped support the ABC this year.
ABC 2016 tax returns were discussed.
Chapter finances were discussed.
Meeting registration payment methods were discussed. ABC is considering slight modifications next year to help minimize monthly invoices to registrants.
ABC is looking to upgrade the name tags distributed to meeting attendees as well as developing unique personalized name tags for Corporate Sponsors.

March Meeting
March meeting was a joint meeting with AEE at Embassy Suites in Waltham, MA
Meeting hosted by AEE

Meeting adjourned at 5:35 PM

ASHRAE BOSTON UPCOMING EVENTS

Visit https://ashraeboston30.wildapricot.org/resources/Documents/Save%20the%20Date%205.pdf for more information.

April Meeting
When: April 11, 2017
Where: Metro Meeting Centers, Boston

Night Shift Brewery Tour
When: April 26, 2017
Where: Night Shift Brewery, Everett, MA

Installation of Officers
When: May 9, 2017
Where: TBD

Golf Outing
When: June 5, 2017
Where: Halifax Country Club, Halifax, MA

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
www.afe74.org

USGBC Massachusetts Chapter
www.usgbcma.org

AEE New England Chapter
www.aeenewengland.org/

IBPSA Boston Chapter
http://ibpsa-boston.com/

RESEARCH PROMOTION

By: Stacie Suh

Dear ASHRAE Members,

As always, I would like to extend my sincerest thanks to you for your support of ASHRAE Research last year. It's because of your support that we were able to fund more than $14 Million worth of research. More than 80 research projects worldwide received support from ASHRAE because of your investment. We've begun the 2016-2017 Campaign and I hope we can once again count on your support of ASHRAE Research this year. The Boston Chapter goal for 2016-2017 is $25,001, Region I goal $188,000 and society goal is $2.6 million.
We have raised $13,329.00 so far with $11,622.00 remainder of to go.

Thank you to following Donors:

Boston ASHRAE Chapter
BR+A Consulting Enigeers
Daikin
Dr Benjamin S Weil
Green Footprints Commissioning
HTS Engineering Ltd
Industrial Plastic Fan
Jason Stack
Kirschner Associates Inc
Leonhardt Company Inc
Mr Anthony H Castelline
Mr Brian E Austin
Mr Christopher M Wysoczanski
Mr Dan Senese
Mr Daniel P Diorio
Mr Daniel P J Carington
Mr David Goodman
Mr David P Kirschner
Mr Edward Dullea
Mr Gene F Koons, Jr
Mr J Michael Fleming
Mr James E Armstrong
Mr Jeffrey H Schultz
Mr Jeffrey Zajac
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Walsh Mechanical Contractors

As always, you may also make your investment online at www.ashrae.org/donate. If you are interested in donating in other method than online, please let me know.
Your contribution will automatically go toward helping the Boston Chapter reach our RP goal for 2016-2017.

If you'd like a list of research projects being conducted in the region or about specific topics, please let me know.

Here are few links that you might find usuful.

- Also you can find more information on resource promotion, please go to https://www.ashrae.org/standards-research--technology/ashrae-rp.
- If you are intersted in important dates and deadlines for research projects please click on https://www.ashrae.org/standards-research--technology/research.
- These Research Project Final Reports document the results of the research project, and are approved by the sponsoring Technical Committee. ASHRAE members have free access through the Members-Only Research Projects Final Reports site.
- If you are interested in submitting solicited research project, go to https://www.ashrae.org/standards-research--technology/research.
- If you are interested in donating to ASHRAE Resource, go to www.ashrae.org/donate

Again, thank you for your continued support of these vital projects – it's greatly appreciated.
Please contact me with any questions at stacie.suh@dxseng.com.

Stacie Suh /RP Chair 2016-2017
Email

ASHRAE Boston Chapter

52nd Annual Golf Outing

Monday, June 5, 2017

COUNTRY CLUB OF Halifax

100 Country Club Dr, Halifax, MA 02338
Phone: (781) 293-9061

Once again the ASHRAE Boston Chapter is proud to host our annual golf outing where you can spend some quality time with your friends, co-workers, customers and vendors! Please read through the sponsorships to find one that strikes your fancy.

Please contact **Jim Liston** at JListon@columbiacc.com with any questions. Deadline for registration is **May 15, 2017**. All event proceeds go towards Boston Chapter operations and ASHRAE Research Promotion.

Schedule of Events

11:30 am	Registration & Lunch
12:45 pm	Shotgun Start (true scramble format)
6:00 pm	Reception

All *Sponsorship* levels include:

- One round of golf for four (4) players
- BBQ Lunch
- Buffett Dinner
- Gift bag for each player

Please inquire about the opportunity to provide additional marketing material for gift bags! As always, thank you for your continued support!

2017 Sponsorship Opportunities

$2,000 **Air Cannon Shot Sponsorship** (1 Available)
- Company Logo on tee box signage on one (1) hole
- Closest to Pin and Hole In One Contest

$1,150 **Lunch Sponsorship** (5 Available)
- Company Logo displayed during lunch

$1,150 **Picture Sponsorship** (1 Available)
- Company Logo on picture handed to each player

$1,000 **Beverage* Cart Sponsorship** (1 Available)
**Non-Alcoholic Beverages Only*
- Company Logo displayed on beverage carts

$1,000 **Beverage* Shack Sponsorship** (1 Available)
**Non-Alcoholic Beverages Only*
- Company Logo displayed on beverage carts

$1,000 **Practice Green Sponsorship** (2 Available)
- Company Logo on signage at practice range

$900 **Longest Drive Sponsorship** (1 Available)
- Tee Box signage on one (1) contest hole

$900 **Closest to the Pin** (1 Available)
- Tee Box signage on one (1) contest hole

$850 **Hole Sponsorship** (15 Available)
- Tee Box signage on one (1) hole

$650 **Basic Foursome**

Contact Information:

Name _____

Title _____

Company / Organization _____

Email _____

Address _____

City, State ZIP _____

Phone _____

Foursome Information:

1. Name _____
   Title _____
   Company _____
2. Name _____
   Title _____
   Company _____
3. Name _____
   Title _____
   Company _____
4. Name _____
   Title _____
   Company _____

- ❑ Air Cannon Shot Sponsorship ($2,000)
- ❑ Lunch Sponsorship ($1,150)
- ❑ Picture Sponsorship ($1,150)
- ❑ Beverage Cart Sponsorship ($1,000)
- ❑ Beverage Shack Sponsorship ($1,000)
- ❑ Practice Green Sponsorship ($1,000)
- ❑ Longest Drive ($900)
- ❑ Closest to the Pin ($900)
- ❑ Hole Sponsorship ($850)
- ❑ Basic Foursome ($650)

Total Sponsorships: $ _____

Payment By Credit Card:
Visit our website at http://www.ashraeboston.org/golfouting

Payment by Check:
Make checks payable to "**ASHRAE Boston**" and Mail to:

ASHRAE Boston Chapter
c/o Columbia Construction Co.
100 Riverpark Drive
North Reading, MA 01864
Att'n: Jim Liston

Questions & Registration: JListon@columbiacc.com

Society GGAC Update

About 18 months ago, ASHRAE agreed to support an initiative with the US Department of Energy that was being conducted by the Building Codes Assistance Project (BCAP) and the Center for Sustainable Energy (CSE) (click **here** for more information on the project). The project provides solar photovoltaic (PV) training for licensed design professionals in 22 cities across the US. Your area has been chosen as one of the 22 locations and I'm writing to let you know about this opportunity. This training is specially designed for architects and engineers, and HSW continuing education credits will be provided to attendees. Designers will learn – for both new construction and remodels – the considerations for incorporating solar photovoltaics (PV) into design plans, how to speak with clients about the benefits of solar PV, where to find information on the financial incentives available for solar PV, and how to differentiate themselves in the marketplace by offering solar PV to clients.

The trainings are funded by the U.S Department of Energy SunShot Initiative's Solar Training and Education for Professionals (STEP) program, which aims to make solar electricity competitive with traditional energy sources by the end of the decade. Training has been held in four of the cities and now the final 18 have been scheduled. They are:

1. Washington, DC
2. Denver, CO
3. Boston, MA
4. Stamford, CT
5. Miami, FL
6. Orlando, FL
7. Minneapolis/ Rochester, MN
8. Phoenix, AZ
9. Spokane, WA
10. Columbus, OH
11. Houston, TX
12. Dallas, TX
13. Albuquerque, NM
14. Des Moines, IA
15. Raleigh/Durham, NC
16. Atlanta, GA
17. Charleston, SC
18. Indianapolis/Carmel, IN

CTTC

By: Dan Carington

Mar 22, 2017

Contact: Allen Haynes
Public Relations
404-446-1677
ahaynes@duffey.com

ATLANTA – ASHRAE is pleased to host industry professionals and experts at its upcoming Annual Conference from June 24-28. The five-day event boasts eight conference tracks, tours, social events and a keynote message from Derreck Kayongo, CEO of the Center for Civil and Human Rights.

Additionally, 2017-18 ASHRAE President Bjarne W. Olesen, Ph.D., Fellow ASHRAE, Life Member, will unveil his presidential theme during the President's Luncheon on Monday, June 25.

Registration is now open for the event, which will take place in Long Beach, Calif. at the Long Beach Convention and Entertainment Center. Committee meetings will be held at the Hyatt Regency Long Beach and the Renaissance Long Beach.

"ASHRAE's Annual Conference brings together thousands of professionals who strive daily to innovate sustainable technology for the built environment," says 2016-17 ASHRAE President Tim Wentz, Fellow ASHRAE, HBDP. "This conference provides unequalled networking opportunities and showcases top-notch programming that will help those professionals continue shaping the industry for a sustainable future."

Among the conference's most anticipated elements, this year's Technical Program features several new tracks, including one on net zero energy (NZE) – a topic that has been at the forefront of the building industry recently, especially in California

The Technical Program will address the benefits of NZE, how to achieve construction goals in the design and operation of buildings, how Title 24 of the Energy Efficiency Standards for Residential and Nonresidential Buildings will require all commercial buildings to be NZE by 2030, and more.

Technical Program tracks include:

- Net Zero Energy Buildings: The International Race to 2030 (NEW);
- Building Life Safety Systems (NEW);
- Commissioning: Optimizing New and Existing Buildings and their Operations;
- Controls (NEW);
- Fundamentals and Applications;
- HVAC&R Systems and Equipment;
- Refrigeration; and Residential Buildings: Standards Guidelines and Codes (NEW)

The conference's fifth annual Research Summit will report the latest research results on building science and renewable energy and its impact as we move toward NZE buildings.

ASHRAE Learning Institute will offer two full-day seminars, and eight half-day courses during the conference. Courses include Efficient Energy Management in New and Existing Buildings; Designing High-Performance Healthcare and HVAC Systems; and High-Performance Building Design: Applications and Future Trends. More information can be found at www.ashrae.org/longbeachcourses.

Those interested in sitting for one of six ASHRAE certification exams must apply by June 2. The exams include: Energy Assessment, Energy Modeling, Commissioning, Healthcare Facility Design, High-Performance Building Design and Building Operations. Learn more and apply at www.ashrae.org/longbeachexams.

Learn more and register for the 2017 ASHRAE Annual Conference at www.ashrae.org/longbeach. ASHRAE is pleased to grant complimentary registration to editorial staff and members of the press. Contact Allen Haynes at ahaynes@duffey.com for more information.

MEMBERSHIP PROMOTION

By: Dan Carington

Hello members and readers, spring is here! It is time for a little spring cleaning and reviewing our membership status by logging into the Society website at www.ashrae.org. Sign in and confirm your yearly membership dues are up to date. Please remember that the Society only allows you 6 months grace period to pay your dues. Once that 6 month has passed you are dropped from their data base, thus you will need to start all over again, losing any years you have accumulated. Let's avoid that and bring our accounts up to date and enjoy the next year or 3 years worry free.

Student membership has spiked somewhat since January 2017, great job Yuka Narisako! Students that have graduated within the last 6 months are eligible to take advantage of the SmartStart Program. What is the SmartStart program? Simply put, it's the best way for ASHRAE student members to receive the many benefits of Associate grade membership after finishing college. SmartStart is a 3 year program that allows Student members to transfer to Associate grade membership at a rate that is recent-graduate friendly with the payment structure.

The SmartStart participants dues structure is based on 3 years respectively; $20 (+) $72 (+) $102 = $194 for 3 years. If you know any Students that have graduated and in the job market, have them join ASHRAE and they will appreciate the networking opportunities they will make alongside the experience that comes with it.

Please help me welcome our latest new members since our March newsletter by giving them a warm welcome;

Ms Donna Thibodeau	Mr Greg Peterson	Ms Claire O'Reilly	Shawn A Hoskins
Mr Ryan Timothy Doak	Ms Sophia Nitkey	Mr Bernard Sidze	Mr Ameya Ulhas Ghodke
Mr Xiangru Wang	Mr Stephen Froese	Mr Daniel Kevin DeVaux	

Welcome, we are so looking forward to seeing you all at our next Boston ASHRAE meeting or event. Any comments or questions, please feel free to contact me at dcarington@brplusa.com

ASHRAE Awards More Than $118,000 To Fund 26 Undergraduate Projects In Eight Countries

ATLANTA – ASHRAE announced today its 2017 Undergraduate Program Equipment Grants – which encompasses a group of 26 undergraduate projects led by students from around the world who are poised to continue ASHRAE's commitment of shaping tomorrow's built environment today. The awarded grants total more than $118,000 and will help the winning students complete their undergraduate projects.

The Undergraduate Program Equipment Grants is an ASHRAE program that provides grants to engineering, technical and architectural schools worldwide. Its goal is to increase student knowledge, learning and awareness of the HVAC&R industry through the design and construction of senior projects. Grants are used to fund equipment and supplies for senior projects and two-year technical school projects that focus on ASHRAE-related topics.

"Discovering and supporting undergraduate engineering, technical and architectural projects is crucial to enhancing the quality of hands-on experiences for students," says Russell Marcks, a previous winner of the grants and current Student Activities Chair for ASHRAE. "These grants are incredibly helpful in presenting students with the opportunities to work in a task-oriented lab environment with the same real equipment they will work with in the field as professionals."

More than 46 entries were received and evaluated for this year's grants. The winning projects were chosen based upon guidelines that include: relevance as an ASHRAE-related topic; long-term student impact of the project; amount of funding requested; and the participating students' involvement with ASHRAE.

This year's winning projects are:

- "Ductless Mini-Split Demonstration Units," **California State Polytechnic University at Pomona**
- "Integration of a Humidifier and Measuring Points to an HVAC Teaching Mockup," **École de Technologie Supérieure**
- "Solar Powered Adsorption Refrigerator for Storage of Vaccines in Remote Areas," **Ghulam Ishaq Khan Institute of Engineering Sciences and Technology**
- "Air Heating and Dehumidification for Low Airflow Velocities in Electrohydrodynamic Assisted Food Drying," **Grove City College**
- "Undergraduate Building Science Laboratory: HVAC Systems and Measurements," **Illinois Institute of Technology**
- "Design and Development of DC Inverter Operated Air Conditioner Using Alternative Refrigerant HFC-161 as an Alternative to HCFC-22," **Maharashtra Institute of Technology College of Engineering**
- "Development of Versatile Refrigeration Test Rig with Mini Channel Condenser," **Marathwada Mitra Mandal's College of Engineering Pune**
- "Development and Evaluation of Solar Hybrid Adsorption Cooling System for Rural Application as a Demonstration Unit," and "Development and Fabrication of Standing Wave Thermo-Acoustic Refrigeration System as a Training and Demonstration Unit," **Nagarjuna College of Engineering and Technology**
- "Application of Reconfigurable Field-Programmable Gate Array Technology in the Design and Implementation of HVAC Control and Building Automation System," **North Carolina A&T State University**
- "A Hot-Gas Bypass Load Stand to Demonstrate Compressor Performance," and "A Learning Environment for the Selection of HVAC Duct Work," and "Ground Source Heat Pump Learning Environment for Undergraduate Education," **Oklahoma State University**
- "Performance Analysis of Solar Operated Milk Refrigerator Using Hybrid Nanomaterials," **Poornima College of Engineering**
- "Design of Thermoelectric Cooler in Air Duct System," **Purdue University Northwest**
- "Biothermal Heating of Greenhouses with Thermal Storage for Northern Climates," **Rochester Institute of Technology**

Continued on Next Page—

For Release: March 24, 2017 Contact: Allen Haynes Public Relations/404-446-1677 or ahaynes@duffey.com

—Continued from Previous Page

- "Design and Prototyping of a Carbon-Dioxide-Based Heat Pump Integrated Energy System," **Ryerson University**
- "Variable Air Volume / Constant Air Volume Air Handling Unit Design, Installation and Commissioning," **Sinclair Community College**
- "Air Handler Input / Output Training Station," **State University of New York, Canton**
- "Air Performance Test Unit for Electronically-Commutated Plug Fans," **Technological and Higher Education Institute of Hong Kong**
- "Design and Construction of Radiant Cooling System in Residential Houses for Comfort Cooling in Humid and Tropical Countries," **Technological Institute of the Philippines-Quezon City**
- "Development of a Localized HVAC System Installed in a Desk," **Universidade do Algarve**
- "Indoor Environment Quality Platform," **University of Novi Sad**
- "Design and Fabrication of a Force Draft Cooling Tower Laboratory Training Unit," **University of Santo Tomas**
- "Nanofluid Absorber," **University of Windsor**
- "Energy and Thermal Comfort Evaluation for Occupancy-Based Variable Air Volume System Controls," **University of Wyoming**

The top two projects will be presented during the Student Program at ASHRAE's 2018 Winter Conference, which will take place January 20-24, 2018 in Chicago. Those projects are "Design and Prototyping of a Carbon-Dioxide-based Heat Pump Integrated Energy System," Ryerson University and "A Hot-Gas Bypass Load Stand to Demonstrate Compressor Performance," Oklahoma State University. For more information about the program, please visit www.ashrae.org/grants.

About ASHRAE

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

ASHRAE Learning 2017 Online Course Series

REGISTRATION

One-part course (3 hours):
$284 ($219 ASHRAE Member)

Two-part courses (6 hours):
$484 ($359 ASHRAE Member)

Register

MULTIPLE PARTICIPANTS

Site Licenses are Available when five or more attend. Learn More >>

TIME FRAME

All courses are presented from 1:00 - 4:00 PM, Eastern Time.

General Information

Information about the ASHRAE online course series. Learn More >>

Note: *Course fees listed above are per person for a single presentation connection for individual use and may not be shared with other users. All registrants must individually register for the desired course to participate and receive continuing education credit.*

All courses are archived for a period of time after their initial presentation.

Receive a 10% discount on the **PDF** format of the Recommended Reference. (Discount is included in item prices on registration form.)

Two-Part Half-Day Short Course List

The following course carries 6 CEU/PDH credits and is comprised of two parts. Registrants must attend both parts in order to receive CEU/PDH credits. Archiving is available.

Note: *Course fees listed are per person for a single presentation connection for individual use and may not be shared with other users. All registrants must individually register for the desired course to participate and receive continuing education credit.*

Nov 1, 2017

New! Complying with Standard 90.1-2016, Parts I and II, ES Practices
The 2016 update of ASHRAE Standard 90.1 Energy Standard for Buildings is a major revision, containing more than 125 changes from the 2013 version. Together, Standards 90.1-2007, 90.1-2010, 90.1-2013 and 90.1-2016 produce almost 40% energy savings from the 2004 version. The 2016 edition offers a si...

Half-Day Short Course List

The following courses each carry 3 CEU/PDH credits. Archiving is available.

Note: *Course fees listed are per person for a single presentation connection for individual use and may not be shared with other users. All registrants must individually register for the desired course to participate and receive continuing education credit.*

Mar 29, 2017

Design of Affordable and Efficient Ground Source Heat Pump Systems
This course describes the best design practices of ground source heat pump systems to achieve maximum customer benefit. The course examines the economic analysis of ground source vs. more traditional systems and what is necessary to design an effective and efficient ground source system. The course...

Apr 5, 2017

New! Complying with Standard 90.1-2016: Envelope/Lighting ES Practices
ASHRAE's Standards 90.1-2010 and 90.1-2013 together produce almost 40% energy savings from the 2004 version, with the envelope and lighting requirements contributing substantially to these reductions. This course focuses on the importance of the

2016-2017 Meeting Schedule

Date	Main Meeting/ Tech Session	Speaker	PDH Credits	Location/ Special Night
September	Lessons Learned	Steve Tafone	1.0	Embassy Suites 550 Winter St. Waltham
Wednesday September 21, 2016	N/A		N/A	Research Promotion/Membership Promotion
October	Net Zero Energy Building	Conor McGuire	1.0	CBRE Amenity Center 100 High St. Boston
Tuesday October 18, 2016	**Tech Session:** Coil Freeze Protection	Cooney Coil	TBD	Past Presidents & History
November	Tour of Bruins' Training Facility		-	Warriors Ice Arena 80 Guest St. Boston
Tuesday November 8, 2016	N/A	N/A	N/A	Student Activities/ Young Engineers in ASHRAE/Women in ASHRAE
December	Solar Heating - Hosted by ASPE	TBD	TBD	Lantana 43 Scanlon Dr. Randolph
Tuesday December 13, 2016	**Tech Session:** TBD	TBD	TBD	Joint Meeting with ASPE
January	Steam Design	Kevin Foley	TBD	Embassy Suites 550 Winter St. Waltham
Tuesday January 10, 2017	**Tech Session:** Montreal Protocol Refrigerant Updates	Trane	TBD	Research Promotion/Membership Promotion
February	Space Pressurization	Jim Coogan	1.0	Metro Meeting Centers 101 Federal St. Boston
Wednesday February 15, 2017	**Tech Session:** Proper Venting of Fuel Fired Appliances	Frank I Rounds	1.0	Joint Meeting with I2SL
March	Demand Reduction - Hosted by AEE	Carlos Nouel	TBD	Embassy Suites 550 Winter St. Waltham
Wednesday March 1, 2017	**Tech Session:** TBD	TBD	TBD	Joint Meeting with AEE
April	Standard 100	Ginger Scoggins	TBD	Metro Meeting Centers 101 Federal St. Boston
Tuesday April 11, 2017	**Tech Session:** Attract, Retain & Promote Women in the HVAC Industry Open Discussion	Ginger Scoggins	TBD	Student Activities/Young Engineers in ASHRAE/Women in ASHRAE
May	Installation of Officers		N/A	TBD
Tuesday May 9, 2017				
June	Golf Outing	Jim Liston	N/A	Halifax Country Club, Halifax, MA
Monday June 5, 2017				Research Promotion

2016-2017 BOSTON CHAPTER OFFICERS
CURRENT BOARD OF GOVERNORS & CHAIRPERSONS

OFFICERS

President
William Tang,
BR+A
617-254-0016
c001@ashrae.net

President-Elect
Mike Gilroy,
BR+A
617-925-9255
c001pe@ashrae.net

Vice President
Dan Carington
BR+A
617-925-8236
c001vp@ashrae.net

Secretary
Mark Leonard
BR+A
617-925-8322
c001sec@ashrae.net

Treasurer
Deanna Adkison
AKF Group
617-535-8236
c001tr@ashrae.net

BOARD OF GOVERNORS

2016-2019

Darcy Carbone
Stebbins Duffy, Inc.
617-957-2567
c001bog2@ashrae.net

Christine Reinders
CannonDesign
617-517-6204
c001bog1@ashrae.net

Stacie Suh
Stebbins Duffy
781-258-1002
c001bog9@ashre.net

Steve Tafone
Suffolk Construction
978-774-1057
c001bog10@ashrae.net

2015-2018

Daniel Diorio
Boston College
617-552-8772
c001bog4@ashrae.net

Jim Liston
Columbia Construction Co.
978-664-9500
c001bog6@ashrae.net

Justin Mole
Cannon Design
c001bog7@ashrae.net

Erin Popa
BR+A
617-925-8205
c001bog5@ashrae.net

2014-2017

Dan Carington
BR+A
617-925-8236
c001bog3@ashrae.net

William Garvey
781-910-9576
c001bog12@ashre.net

Mark Leonard
BR+A
617-925-8322
c001bog8@ashrae.net

Teri Shannon
DAC Sales
207-985-0873
c001bog11@ashrae.net

COMMITTEES

Attendance
Chris Pietrocarlo
BR+A
ashraebostonattandance@outlook.com

Chapter Program
Dan Carington
BR+A
617-925-8236
c001cttc@ashrae.net

Chapter Technology Transfer
Dan Carington
BR+A
617-925-8236
c001cttc@ashrae.net

CRC Alternate
Mike Gilroy, BR+A
617-925-9255
c001pe@ashrae.net

CRC Delegate
William Tang, BR+A
617-254-0016
c001@ashrae.net

Golf Outing
Jim Liston
Columbia Construction Co.
978-664-9500
jliston@columbiacc.com

Grassroots Government Activities
Steven Rosen
RDK Engineers
c001ggac@ashrae.net

Christine Reinders
Cannon Design
Creinders@cannondesign.com

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

Historian
Eric Edman
BR+A
617-925-8325
c001his@ashrae.net

Honors & Awards
Darcy Carbone
Stebbins Duffy, Inc.
617-957-2567
c001ha@ashrae.net

Membership Promotion
Dan Carington
BR+A
617-925-8236
c001mem@ashrae.net

Nominating
Bob Persechini
RDK Engineers
617-345-9885
c001nom@ashrae.net

Research Promotion
Stacie Suh
Stebbins Duffy
781-258-1002
c001rp@ashrae.net

Newsletter Editor
Deanna Adkison
AKF Group
617-535-8236
c001ne@ashrae.net

Professional Development
Mark Leonard
BR+A
617-925-8322
mleonard@brplusa.com

Publicity
Andrew Krenning
Siemens Industry, Inc
781-589-4097
c001pub@ashrae.net

Refrigeration
Steven Tafone
Suffolk Construction
978-774-1057
c001ref@ashrae.net

Joseph Dussault
JDussault@engsolutions.com

Student Activities
Yuka Narisako
BR+A
c001sa@ashrae.net

Sustainability
Lance Brown
BVH
LanceB@bvhis.com

Joseph Dussault
JDussault@engsolutions.com

Website
Kevin Doty
Victaulic
c001web@ashrae.net

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

Deanna Adkison
AKF Group
617-535-8236
dadkison@akfgroup.com

YEA
Joseph Dussault
c001yea@ashrae.net

Christine Reinders
Cannon Design
Creinders@cannondesign.com

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ASHRAE RESEARCH

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CONTACT STACIE SUH NOW! at 781-258-1002 or c001rp@ashrae.net

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

ASHRAE RESEARCH

Stacie Suh
10 Technology Dr.
Peabody, MA 01960

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.

Name:_____

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INDIVIDUAL	$25.00	$50.00	$100.00	$200.00	Other: _____
CORPORATE	$250.00	$500.00	$1,000.00	$2,000.00	Other: _____

ASHRAE Boston Chapter

NorthEastAire

ASHRAE - BOSTON CHAPTER www.ashraeboston.org

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