ASHRAE Philadelphia Chapter

April 2015
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COSTS

Fees are based on online reservations and prepayment.

Philadelphia Chapter Members:
$10

Guest Ticket:
$10

Registration includes 2 free drink tickets.



QUAKER CITY CLIMATE

Thursday, April 9, 2015

5:00 PM to 8:00 PM

Product Show

For the first time, the Chapter will be hosting this show as the focus of its monthly meeting.

There will be a light dinner buffet and heavy hors d'oeuvres.

We encourage members to register if they plan on attending to assist the chapter with planning food and drinks.

All attendees that register in advance will qualify for a raffle for a free iPad.

See the list of vendors on page 8.

Click here to Register

LOCATION

Fisher's Tudor House
1858 Street Road
Bensalem, PA 19020

For directions, click here.

2014- 2015

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James Lill, PE

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Brian Dail

Membership Promotion Chair
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Grassroot Government Activities
Casey Younkins, PE

Golf Outing Director
Tim Reinking

PRESIDENT'S MESSAGE

Welcome to the April Newsletter – I always enjoy this time of year. We will eventually shake off the cold from the Winter and have our Spring-like temperatures. It's a great time to open our windows and enjoy the natural ventilation. It is also a great time to get re-inspired and motivated to finish off our Chapter's fiscal year strong. We had a great presentation on data centers in March. Don Beaty, PE did a great job illustrating the intense heat output of a server rack with his example of a fire place and opened our eyes to the possibility of economizer operation for data centers. In an effort to finish our year out strong, we have several events (noted below) coming up that we look forward to seeing you at. We are trying new ideas that we believe you will be excited to participate in:

1) **April's Vendor Show** – This year we are trying a pure vendor show **on April 9th**. We will not have a formal presentation so that our engineering community will have more time to review the products on display. In essence you can have up to 30 mini presentations. We are also going to be giving away a mini iPad for those who register ahead of time.

2) **CANstruction** – **On April 17th,** our organization will be competing in the competition. There are more details on page 6. If you are interested in helping out, please contact me or Chris Gale.

3) **DuPont Golf Outing** – **On May 4th**, our golf outing will be returning to the Championship Course at Dupont Country Club. The course should challenge our avid golfers and the format will allow our "once a year golfers" to still have fun. Hey, if I can be out there, anybody can be out there…

Position Highlight – **Refrigeration / History/ Honors and Awards** – This month highlights more the Board member then one position. **Brian Dail** is somewhat of a new member to our Board and over the past few years has stepped up to tackle 3 areas of our Chapter that can sometimes be overlooked. Normally we assign the History chair to one of our new members to help get their feet wet, but this can be challenging for a new member to try and capture the Chapter's history. Over the past few years, Brian has put together history displays at the annual CRC conference, has helped scan and Photoshop archived photos for a slide show, and has interviewed past Presidents to capture our history. Some of his work is typically on display at our May meeting. Brian was also assigned our Honors and Awards Committee. This past year, Brian made a submission to Society to nominate Walter Speigel for the Hall of Fame. Ultimately Mr. Speigel was not selected, but this is not to say we can't try again next year if we can gain new information to strengthen our application. And last but not least, Brian was assigned to our Refrigeration Committee. For the past several years, he tried to set up a tour of a refrigerated warehouse. He has put a lot of effort into the tour, but due to timing and access it has not been able to come to fruition. As you can see, Brian has put a lot of effort into our Chapter and is an up and coming member of our Board. Please help me thank Brian for his hard work at the next Chapter meeting. And if you have some historical information to share, please pass it on to him.

-Mike

Mike Witkowski
Philadelphia Chapter President
c021@ashrae.net

ONLINE REGISTRATION NOW OPEN!!

Philadelphia Chapter ASHRAE
Golf Outing

Monday, May 4, 2015
Shotgun Start 12:30 PM

DuPont Country Club
1001 Rockland Road
Wilmington, DE
www.dupontcountryclub.com

Due to an upgrade to the
CHAMPIONSHIP COURSE
at the DuPont Country Club,
the date for the golf outing has been revised.



Click here to register!

YEA Scholarship

We are asking that working professionals nominate young engineers at your firms for a YEA scholarship. These individuals should have shown outstanding performance in the HVAC&R industry and show an active involvement and interest in ASHRAE.

The nomination form may be downloaded here. The winner will be announced at a future ASHRAE meeting. Nominations should be sent to Jeffrey Pisarek at c021yea@ashrae.net.

Are you interested in advertising your company in the
2015-2016 Philadelphia Area Directory
of Associations, Consulting Firms, and
Manufacturers' Representatives?

Email hope@mmco1.com
before April 20, 2015

February Meeting Photos
SMCA / ASHRAE Scholarships

SMCA partnered with ASHRAE to give scholarships to six students at the joint SMCA/ASHRAE meeting held in February. The students were selected based on overall outstanding performance and an involvement in HVAC fields through their studies. Please join us in congratulating the following students for their outstanding work!

ASHRAE Award Recipients:
Jesse Schwakoff (Drexel), Andrew Staehle (Temple), Andrew Gentile (Widener)

SMCA Award Recipients:
Janet Tran (Drexel), Nikolaus Marcella (Temple), Andrew Zauflik (Widener)



ASHRAE Award Recipients (Pictured Left-Right): ASHRAE Student Activities Chair Erik App, Jesse Schwakoff, Andrew Staehle, and Andrew Gentile.



SMCA Award Recipients (Pictured Left-Right): Andrew Zauflik, SMCA President Gary Luthe, Janet Tran, Dr Steven Ridenour (Temple Advisor), and Nikolaus Marcella.



Philadelphia Chapter ASHRAE Basic HVAC Class

The last session of the 2014-2015 ASHRAE Philadelphia Chapter Basic HVAC System Design Course was held on March 19. Twenty-four students successfully completed the course.

This is a demanding one-year course that introduces students to the fundamentals of HVAC design. Various topics are taught by industry professionals. The class is a great way to further, or even begin, a career in HVAC.

The 2015-2016 course is now in the planning phase. **The course is currently looking for a location to host next year's classes.** The facility would need to provide seating for 30 students along with a computer connection and a projector. If you are able to host this class at your facility, please contact Jim Lill (Course Coordinator) at LILLJK@mail.ashrae.org.

Classes meet Tuesdays and Thursdays from 6:15 PM to 8:30 PM beginning in October and running through the end of March. Enrollment applications will be available in August.

Membership Advancement

If you are currently an ASHRAE Associate Member, becoming a full Member is easier than you think!
See page 12 for details.

ASHRAE Philadelphia Corporate Sponsorships Available

The Philadelphia Chapter invites your company to join as a Corporate Sponsor for the 2014-2015 year. Your firm's participation in this program would enable us to make a wonderful donation to ASHRAE Research Promotion which includes over $ 1.5 million in local research funding. Corporate Sponsors are listed on our web site, in our newsletter, and in our annual directory. They receive free copies of our directory and recognition at all of our events. With the ease of one payment, you may get all this, as well as free dinner tickets good for our monthly meetings, and make a valuable contribution to ASHRAE Research at the same time. Since not all companies have the same financial capabilities or quantity of employees, we offer a few different levels of corporate sponsorship. Each level will receive the same types of benefits, with some differences in quantities and discounting.

We hope you will decide to join us as a Corporate Sponsor. If you are interested, please email us at philachapter@mail.ashrae.org. The Board of Governors thanks you for your continued support of ASHRAE. We hope that this year is successful for your firm.

CANSTRUCTION Philadelphia
Friday, April 17
Liberty Place

This year, our ASHRAE Chapter has elected to participate in the CANSTRUCTION Philadelphia. CANSTRUCTION offers our design community the opportunity to publicly exhibit our imagination and creativity while also demonstrating our concern for the less fortunate members of our community. CANSTRUCTION is organized by young aspiring architects, designers and philanthropists, and through this event the Philadelphia design community can be a catalyst for positive change in our own backyard.

Since its humble beginning in 1992, CANSTRUCTION has:

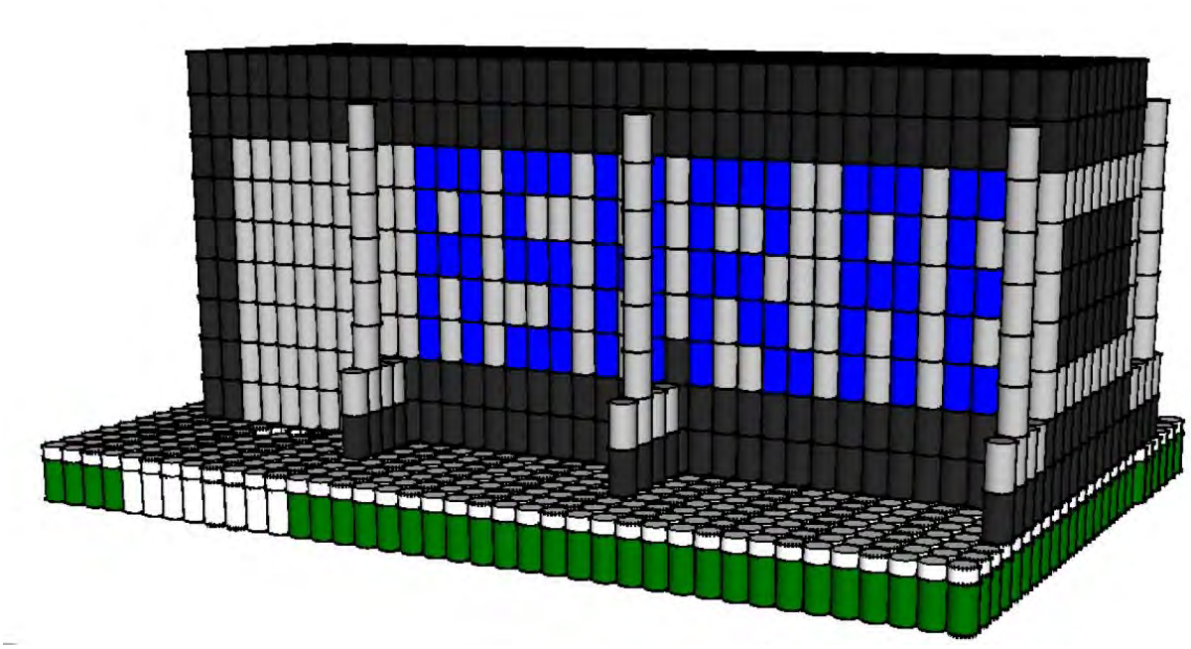
- donated over 15 million pounds of canned food to the community food banks.
- grown to become one of the largest contributors to the food bank in the world.
- raised over 250,000 pounds of food for those in need across the Delaware Valley through Philabundance.

We will be designing a 10'w x 10'L x 10'h ASHRAE logo completely made out of canned goods. We will be building this structure alongside 15 other teams on **Friday, April 17**, at Liberty Place. The exhibit will be open to the public from April 18 through 26.

We are calling for help to raise money to support our efforts to acquire cans. Below is a layout of our design and believe it or not it will require approximately **2,600 cans**!

Please send an e-mail to Christopher.s.gale@jci.com if you would be interested in helping out with our team either in body or in donation.

To learn more about CANSTRUCTION, go to www.canstruction.org.



Please submit articles highlighting novel HVAC technologies to Chapter Technology Transfer Committee Chair Chris Gale (c021cttc@ashrae.net) for consideration in future newsletters.

Did you know there are free design guides available on the ASHRAE web site? The regular technical article is not the only place to get great free information each month. Take a few minutes to log on and see the variety of design guides available to download at no cost. The design guides can be located by using the link below.

https://www.ashrae.org/standards-research--technology/advanced-energy-design-guides

Heat Pumps for Cold Climates

By **Kurt Roth, Ph.D.,** Associate Member ASHRAE;
John Dieckmann, Member ASHRAE;
and **James Brodrick, Ph.D.,** Member ASHRAE

The majority of air-source heat pumps (ASHPs) are in-stalled in moderate to warm areas of the United States, mostly south of the Mason-Dixon Line.

Two major issues make conventional ASHPs unattractive as a heat source in cold climates. First, buildings in colder climates often have appreciably smaller design cooling loads than design heating loads. Second, ASHP heating capacity and coefficient of performance (COP) decrease as the outdoor temperature, *To*, decreases because the temperature lift across the compressor increases. For these reasons, conventional ASHPs sized to meet cooling loads cannot meet the full heating loads at lower *To,* necessitating extensive use of costly, and energy-inefficient, electric resistance heating.

Conceptually, a heat pump designed for a cold climate would have sufficient capacity to meet heating loads around *To*~0°F at a reasonable COP, and would require limited (ideally, no) electric-resistance heat on an annual basis. Such a design would enable effective use of heat pumps in much colder climates than current designs. For example, it could extend the region where heat pumps could reduce heating primary energy consumption or cost over much of the northern U.S.

Several design modifications and technologies have been proposed or introduced (alone and in combination) for cold-climate heat pumps.

Sizing the ASHP for heating instead of cooling • can increase capacity. It does not, however, address the problem of reduced heating cycle efficiency and capacity as *To* decreases. It also can lead to excessive cycling—and the resulting efficiency decrease—at moderate heating loads and during cooling season (since the system is oversized for those conditions).1 Excessive cycling can, in turn, significantly decrease dehumidification effectiveness.2

Multiple or modulating compressors • address mismatched loads by sizing compressor capacity to meet heating design loads at full capacity, while part-load operation ef-ficiently satisfies cooling loads and dehumidification.2,3 The problem of reduced heating cycle efficiency as *To* decreases still remains.4

Geothermal heat pumps, • also known as ground- or water-coupled or ground- or water-source heat pumps (GSHP), overcome the problem of reduced cycle efficiency in cold ambient air by extracting heat from the soil or groundwater at approximately constant underground tempera-tures. In theory, they can achieve near-constant heating and cooling efficiencies year-round. In practice, in colder regions the quantity of heat extracted from the ground (during the heating season) is larger than that rejected to the ground, which depresses the ground temperature around the loop and GSHP efficiency. Still, effectively designed GSHPs in the northern U.S. can achieve aver-age heating COPs on the order of 3 (including pumping power).5

(click here to read the entire article)

Product Show

April 9, 2015

Fisher's Tudor House

Exhibiting Vendors

There will not be a main speaker at our April meeting to allow members to focus on the new products and technologies being displayed by the following organizations:

Associated Steam Specialty Company
B.J. Terroni Co.
Broudy Precision
Bush Sales Associates, Inc.
Carrier Corporation
Clapp Associates Inc.
CM3 Building Solutions, Inc.
Cooney Coil & Energy, Inc.
Coward Environmental Systems, Inc.
Edwin Elliot & Co., Inc.
Energy Transfer Solutions
eSite Systems, LLC
General Aire Systems
James Martin Co. /Aquatherm
Johns Manville
L&R Associates, Inc.
Merion Pump & Equipment
Mitsubishi Electric Cooling & Heating
N.H. Yates & Co., Inc.
Penn Pumps & Equipment Co., Inc.
RD Bitzer Co. Inc.
Suppression Systems, Inc.
TABCo Sales Associates, Inc.
United Energy Products, Inc.
Uponor
Victaulic
Watson McDaniel

ACE MENTOR PROGRAM
ARCHITECTURE • CONSTRUCTION • ENGINEERING

CALL FOR VOLUNTEERS & SAVE THE DATE

ACE NEEDS YOU!

Did you resolve to get more involved in 2015?

What's ACE?

The **ACE Mentor Program of Eastern Pennsylvania** is the local affiliate of a national non-profit organization. ACE (Architecture – Construction – Engineering) engages, excites, and enlightens high school students to consider or pursue careers in the integrated construction industry through mentoring, scholarships, and grants. Students are recruited from public and private high schools in Philadelphia and the suburbs, with special effort made to reach traditionally underrepresented women and minorities. ACE is the design and construction industry's fastest-growing high school mentoring program, reaching over 8,000 students annually.

How Do I Become a Mentor?

ACE follows a group-mentoring model: 8-10 mentors per team of 20-30 students meet biweekly during the school year (approx. 10 meetings). Teams meet at volunteers' offices and on jobsites, then present their final designs at a year-end event.

Mentors can sign up as individuals or with a group of colleagues. The process is simple:

- Complete an online application: www.acementor.org
- Pass a background check
- Complete a training program
- Attend biweekly meetings through the school year (mentors are encouraged but not required to attend every meeting)

ACE Job Shadowing Opportunities

ACE is seeking local firms to offer job shadowing opportunities for students in the ACE program. Just a single day can provide excellent exposure to your field. If you would like to have a student shadow one of your architects, contractors, or engineers, please contact: **Timothy Reinking** | TReinking@hvac.mea.com

Want to Learn More?

Tiffany Millner, AIA, NOMA
Affiliate Director
ACE Mentor Program
36 South 18th Street
Philadelphia, PA 19103
T: 215-820-8929
easternpa@acementor.org
www.acementor.org

Learn the latest on twitter:
Follow **@ACEmentorEPA**

Don't Forget Breakfast!

Attend our annual scholarship breakfast and awards ceremony with 400 of your industry peers. It's our biggest – and only – fundraiser of the year and a great networking opportunity.

ANNUAL SCHOLARSHIP BREAKFAST
Crystal Tea Room
Philadelphia
SAVE THE DATE:
Thursday, 14 May 2015

Ticket and sponsorship details available soon.







Young Engineers in ASHRAE
YEA Phillies Night
Sponsored by CM3 Building Solutions
Wednesday, June 3, 2015

Philadelphia Phillies vs. Cincinnati Reds
6:00 PM—10:00 PM
YEA & Student Registration Fee $15.00

Philadelphia Chapter ASHRAE invites all members under 35 to a night of fun at the Phillies game!

Tickets are limited. Sign up today to get your seat!

Click here for more details and to register!

ASHRAE

Join us at ASHRAE's 2015 Annual Conference

June 27–July 1 | Atlanta, Georgia | **www.ashrae.org/atlanta**

Special first time attendee registration fee available!

Join ASHRAE in its hometown of Atlanta! Take advantage of the opportunity to discuss and examine the latest topics in the building industry, such as high performing buildings and modeling, through the technical program; participate in technical tours; attend ASHRAE Learning Institute courses; sit for an ASHRAE certification exam; and earn professional development credits.

Conference Technical Program—includes the third annual Research Summit, which brings together researchers to present and discuss the latest research. Tracks focus on the design, construction and operation of high performance buildings, specifically advanced design guidance, modeling, operation and optimization, and indoor air quality. Laboratories, refrigeration, fundamentals, applications, systems and equipment round out the program.

Networking—share ideas and learn from fellow members from your hometown and around the world.

ASHRAE Learning Institute—choose from two full-day professional development seminars and seven half-day short courses to stay current on new HVAC&R technologies.

ASHRAE Certification—to gain a competitive edge, apply by June 9 to sit for an ASHRAE Certification exam.



PHILADELPHIA CHAPTER PROGRAMS CALENDAR 2014-2015

Date	Location	Topic	Theme
4/9/2015	Fisher's Tudor House	Product Show	Student Night
5/4/15	DuPont Country Club Wilmington, DE	Golf Outing	
5/14/2015	Wyndham Hotel	Connecting Green Building Outcomes to Enterprise Sustainability Programs by E. Mitchell Swann PE of MDC Systems, LLC	Past President's Night

Program calendar is tentative and subject to change. Please refer to ASHRAE Philadelphia Website for up to date information. Advance registration and pre-payment are required before the meetings.

We need your attendance!

If we are below our guaranteed level for attendees at our meetings, our treasury could be negatively effected. Our programs are designed around the membership's input and we all need to support these meetings to maintain a strong/informed association. We hope to see you at our next meeting. Please come out and support our Chapter!



Registration for the April 23, 2015 ASHRAE Webcast, "New Tomorrows for Today's Buildings: Existing Building Commissioning" opened on **Monday, March 23** at www.ashrae.org/webcast. This **FREE** webcast will be broadcast live via the internet.

Please help CTTC promote the webcast by adding the following text to your email signature:

Register now at http://www.ashrae.org/webcast for ASHRAE's FREE Webcast,
"New Tomorrows for Today's Buildings: Existing Building Commissioning."

This webcast will feature industry experts who will define the benefits of existing building commissioning for the environment, occupants, operations staff, and overall ownership costs. Viewers will be able to recognize the varied scopes of commissioning, when to apply comprehensive versus focused commissioning, and best practices in existing building commissioning specifications & contracting.

Attendees may be awarded three (3) Professional Development Hours (PDHs). The webcast program has also been approved for three (3) AIA Learning Units (LUs) and three (3) GBCI Continuing Education Hours (CEs).

The Philadelphia Chapter
of the
American Society of Heating,
Refrigerating and Air
Conditioning Engineers, Inc.

994 Old Eagle School Road
Suite 1019
Wayne, PA 19087-1866
P 610-971-2169
F 610-971-4859

Visit
our web site at:

www.ashraephilly.org

Republication of material contained herein is expressly forbidden without official Chapter authorization. The Chapter does not speak or act for the Society.
Any member with material to submit for inclusion in the *Climate* can send the information to:

Hope Silverman
P 610-971-2169
hope@mmco1.com

Material can include letters to the editor, member news, upcoming events, comments on chapter programs or issues, etc.

New Philadelphia Chapter Members

New Associates/Members:

Mitesh J. Baria
Adam Blackburn
Anthony D'Ambrosio
Zach O'Neill
Stephen Michael Roth
Walt Schoenborn
Gordon Schweitzer III

Membership Advancement

If you are currently an ASHRAE Associate Member, becoming a full Member is easier than you think! The following count toward the required **12 points** to advance to full membership status. You must update your ASHRAE online biography and send an email to membership@ashrae.org to advance.

Non-accredited degree = 4 points
Accredited degree = 6 points
PE = 4 points
Industry experience = 1 point/year

The New 2014-2015 Directory is Available!

The latest edition of the Directory of Associations, Consulting Firms, and Manufacturers' Representatives in the Philadelphia Area is now available. It sells for $23 each.

Send your check to Emily Albert, ASHRAE, 994 Old Eagle School Road, Suite 1019, Wayne, PA 19087.

If you prefer to pay by credit card, please call Emily at 610-971-2169 or email her at Emily@mmco1.com.