ASHRAE Philadelphia Chapter

November 2017
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QUAKER CITY CLIMATE

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COSTS

Fees are based on online reservations and prepayment.

Philadelphia Chapter Members:
$30

ASHRAE Society Members - Non-Chapter Members:
$40

ASHRAE Life Members:
No Charge

Non- ASHRAE Member:
$40

YEA Member (35 & under):
$25

Students:
$10

Thursday, November 16, 2017

"Jedi Mind Tricks - IPD"

presented by

E. Mitchell Swann, PE

MDC Systems LLC

Click here to Register

5:00 PM to 6:00 PM	Social Hour/Cash Bar
6:00 PM to 7:00 PM	Dinner
:00 PM to 9:00 PM	Presentation

LOCATION

Radisson Hotel Valley Forge
1160 First Avenue
King of Prussia, PA 19406
For Directions: click here

See page 7 for more information.

This is Research Promotion Night!
We hope to see you there!

Please note that the correct date for this meeting is Thursday, November 16.

There has been some confusion on the date.

YEA Bowling Night - Thursday, November 9
See page 7.

2017-2018

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Jeff Crozier, PE, CEM, LEED AP

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President's Message

October was a busy month for the ASHRAE Philadelphia Chapter. We were fortunate to have two events. The first was the annual SMCA Engineers Night. As always, the meeting and venue were first class. The Downtown Club had a beautiful view of the city. The meeting topic was "Understanding Ethics in Engineering" and was presented by Attorney Lawrence Powers, Villanova Professor Frank Falcone, SMACNA Director of Engineering and Technical Services, Mark Terzigni, and Dave Goswami, Chairman and CEO of IPS Engineering.

The second event was new for us this year. ASPE invited ASHRAE to participate in their Product Show and Technical Symposium. The event included four 1-hour HVAC and four 1-hour Plumbing technical sessions. Our members earned a total of more than 40 hours of continuing education during the event. The Product Show also included many vendors displaying products applicable to both HVAC and Plumbing.

Our upcoming meeting will be held on Thursday, November 16, 2017 at the Radisson Hotel Valley Forge. The presentation topic will be "Integrated Product Design" presented by E. Mitchell Swann. This event will be held in King of Prussia. We are looking forward to seeing our regular attendees as well as a lot of new faces from surrounding firms.

Please tell us if you are willing to volunteer to help out with a committee or would like to join the board.

Jeff Crozier, PE, CEM, LEED AP
Philadelphia Chapter President
c021@ashrae.net

ASHRAE 2018 Winter Conference
January 20 - 24, 2018
Chicago, IL



Save the date for the
2018 ASHRAE Winter Conference & AHR Expo in Chicago!

The Winter Conference will be held January 20-24, 2018
at the Palmer House Hilton.

The AHR Expo will take place at the McCormick Center, January 22-24, 2018.
The 2018 Expo will host more than 2,000 exhibitors and
65,000 industry professionals.

When you register for the ASHRAE Conference,
your ASHRAE badge will give you access to the AHR Expo.

Registration is now open.

ASHRAE Philadelphia Corporate Sponsorships Are Still Available

The Philadelphia Chapter invites your company to join as a Corporate Sponsor for the 2017-2018 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.

Those who have signed up for 2017-2018 are listed below and it's not too late to join!

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.

2017-2018 Corporate Sponsors

Bush Sales Associates, Inc.
Clapp Associates, Inc.
CM3 Building Solutions, Inc.
Coward Environmental Systems, Inc.
Elite Air Systems, Inc.
Elliott-Lewis
Ernest D. Menold, Inc.
EwingCole
Finnegan Associates
McHugh Engineering, Inc.
Metropolitan Acoustics
Mitsubishi Electric Cooling and Heating
Peirce-Phelps, Inc.
RD Bitzer Company, Inc.
Schiller & Hersh Associates
The Tri-M Group, LLC
TriState HVAC Equipment
Universal Motor Distributors
Wick Fisher White

The November meeting is Research Promotion Night!

PHILADELPHIA CHAPTER PROGRAMS CALENDAR 2017-2018

Date	Location	Topic	Theme
11/9/2017	South Bowl Lounge N' Lanes	YEA Bowling Night	
11/16/2017	Radisson Hotel Valley Forge	Jedi Mind Tricks - IPD by E. Mitchell Swann	Research Promotion
12/14/2017	The Union League	The Future of Fighting Bacteria by Joe Callahan	Annual Breakfast Meeting
1/25/2018	Wells Fargo Center	Philadelphia Flyers vs. Tampa Bay Lightning	Social
2/15/2018	TBD	Fuel Cells Technology - IEEE/AEE By Geoff Slevin	
March 2018	Fisher's Tudor House	Trade Show	
4/12/2018	TBD	Impacts of Climate Change and Urbanization on Future Building Performance by Dr. Dru Crawley	Students and Membership
5/7/2018	TBD	AIA - Passive House	Past President's Night
5/14/2018	DuPont Country Club	Annual Golf Outing	

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!

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

High Turndown

For more than 16 years, manufacturers have been trying to sell the Mechanical Engineering Community on the concept of extremely high combustion turndown. This pertains to the range of modulation as it corresponds to a burners output. This concept sounds fantastic when selecting equipment as it theoretically would be an insurance policy; enabling the boiler to turndown to satisfy a micro load or allowing for the oversizing of equipment without the risk of short cycling. While this sounds like a solution for multiple applications, it is simply not realistic. This is the first bulletin of a series detailing the reality of high turndown boiler claims. To follow we will illustrate the impact high turndown has on efficiency when operating in a 20:1 or 5% modulation rate.

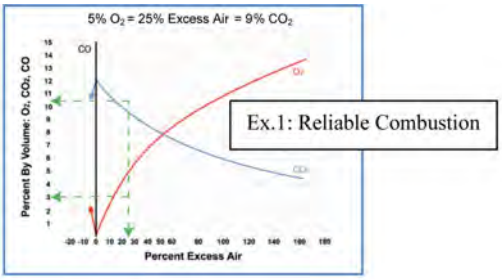
This passage was taken from the U.S. Department of Energy Office of Energy Efficiency and Renewable Energy Office standards for Commercial Packaged Boilers, RIN 1904-AD01

Modulating Burners

Two-stage and modulating burners can decrease losses caused by burner cycling at partial loads. However, modulating burners may not accomplish net energy gains if excess combustion air levels must be increased at low firing rates (in order to maintain combustion performance) or if electrical power requirements for the burner do not decrease in linear proportion to the firing rate. In condensing boiler applications, an increase in excess combustion air ratio can result in reduced latent heat recovery due to decreased flue gas dew point temperatures. This can result in an energy loss that outweighs the benefit of reduced burner cycling.

The explanation of their message is outlined below.

DOE is warning against the effect of increased excess air that is used in boilers that boast high turndown. Please see the below graph showing industry standard combustion (5:1). Please note that we will see roughly 25% excess air in the equation giving us an O2 reading of roughly 5% and a CO2 reading of 9%. This equates to very stable and reliable combustion which will be discussed in part 2 of our High Turndown series.



Ex.1: Reliable Combustion

(click here to read the entire article)

It's that time of year again. I can't believe it's October already! The school year is off to a great start for the **Future City Competition**. To date, 46 schools have signed up and have started designing their cities of the future. A lot of them are new to the program. Last year at this time we had 40 schools registered. Looks like we are going to need as many volunteers as we can get!

Our greatest need right now is for mentors. Each school is assigned a mentor to work with the students and share their real world experiences to help them develop their future city. Just 1 or 2 hours a week can make a big difference in how students approach their project and how they start to address it. The following is a the current list of schools that need mentors:

- East Norriton Middle School -- Norristown, PA
- Esperanza -- Philadelphia, PA
- Hedgepeth Williams Middle School -- Trenton, NJ
- Keith Valley Middle School -- Horsham, PA
- Mother Teresa Regional Catholic -- King of Prussia, PA
- Murray Avenue School -- Huntingdon Valley, PA
- Resurrection Catholic School -- Cherry Hill, NJ
- Sacred Heart School -- Havertown, PA
- Southern Lehigh Middle School -- Center Valley, PA
- St Albert the Great School -- Huntington Valley, PA
- St Elizabeth Parish School -- Uwchlan, PA
- WCPA Homeschool Group -- Pleasant Mount, PA
- Windsor Christian Academy -- Uwchlan, PA

Please let me know if you are interested in being a mentor for any of the schools listed above. If you'd like to be a mentor but don't see a school in your area, send me an e-mail and I will let you know if a school registers.

Please visit our website at **www.futurecityphilly.org** and "Click here to sign up as a Volunteer" on the top left of the page. There you can register to be a mentor, judge, or general volunteer. We will need judges and general volunteers for the day of the competition.

Any questions please contact me via e-mail or phone. Please feel free to forward this e-mail to your friends, co-workers, and technical society members.

Karen R. McManuels, PE
Philadelphia Regional Volunteer Coordinator
volunteer2015@futurecityphilly.org

Mark your calendars!

January 21, 2018

Competition Location:

Archbishop Carroll High School

211 Matsonford Road

Radnor, PA 19087

YEA Bowling Night

Thursday, November 9, 2017

South Bowl Lounge N' Lanes
19 East Oregon Avenue
Philadelphia, PA 19148

Click here to register.

Philadelphia's ASHRAE Chapter invites all members 35 and under (including Students!) to the Young Engineers in ASHRAE (YEA) Fall Social - a night of bowling in South Philadelphia! Please try to get to South Bowl between 6:00 pm and 6:30 pm to get your shoes and lanes. We have reservations for the lanes starting at 6:30 pm, so as people arrive, we can start bowling. There will be appetizers and a full spread of delicious food.

The cost is $15 for YEA members and $10 for Student members and $15 for guests.

Please contact Dan Brown at c021yea@ashrae.net if you have any questions or wish to be added to our YEA directory.

Thursday, November 16, 2017 Meeting

Presentation Summary

Integrated Project Delivery is a hot topic in the design and construction arena today but there is still a bit of confusion about just what that means and how you get it. Some camps will argue that "going green" will give you IPD; some will argue that BIM is the key to IPD too. Both are helpful but IPD isn't a destination or a means of transportation – it's a road. IPD is at its core a mindset about how to think about a project and how to execute those thoughts. This program focuses on some exercises, processes and tools which can help you move along the path that IPD offers. Of course, no tool can guarantee the craft of its users, but good tools can make a project easier.

Speaker Bio

E. Mitchell Swann

Mr. Swann has over 30 years of experience on both domestic and international projects in the areas of consulting, design engineering, construction, project management, forensic engineering and claims analysis. His career includes the engineering and design of mechanical and control systems across a wide range of commercial, industrial and institutional projects and building types including central utility plants, laboratories and research facilities, microelectronic facilities, pharmaceutical facilities, broadcasting, computer centers, correctional facilities and shipboard systems. Mr. Swann has served as Chair on several ASHRAE Technical Committees and co-authored design guidelines for ASHRAE and ISPE. He also served as Vice-Chair of the ABA's Committee on ADR in Construction and currently serves as Chair of the Board of Directors for The Enterprise Center Community Development Corporation. He is frequently a national and international speaker and lecturer for professional organizations and is a member of ASHRAE's Distinguished Lecturer roster since 2005.

The Philadelphia Chapter
of the
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Visit
our web site at:

www.ashraephilly.org

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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 Members:
Charles McLewin

New Affiliates:
Richard Adrian
Chelsea Burnley
Kyle Harris

New Associates:
Daniel P. Donnelly
Ryan J. Flynn
Michael R. Giuliani
Bryan J. Overbeck
Jeff Panchison

The New 2017-2018 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 Hope Silverman, ASHRAE, 994 Old Eagle School Road, Suite 1019, Wayne, PA 19087.
If you prefer to pay by credit card, please call Hope at 610-971-2169 or email her at hope@mmco1.com.

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