



QUAKER CITY CLIMATE

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Dave & Busters

325 N Columbus Blvd
Philadelphia, PA 19106
(215) 413-1951

For Directions :

[Click Here](#)

Parking is **\$12.** (\$5 coupon good towards food or drink)

Dinner Fees:

- Philadelphia Chapter Members with online reservation and prepayment: **\$30**
- ASHRAE Members - Non-Chapter Members : **\$40**
- Non- ASHRAE Member : **\$40**
- Young Engineers (35 and under) with online reservation and prepayment: **\$25**
- Students with online reservation: **FREE**

ENERGY MANAGEMENT IN EXISTING BUILDINGS IT'S STUDENT AND MEMBERSHIP PROMOTION NIGHT

Our next dinner meeting is scheduled for February 11, 2010 at Dave & Buster's. This is a joint meeting with SMCA, as well as a Student and Membership Promotion Night. The event registration can be found [here](#). The event schedule is as follows:

- Social Hour: 5:00pm-6:00pm (Cash Bar)
- Dinner & Student Awards: 6:00pm
- ASHRAE Research Presentation: 6:30pm-7:00pm
- Presentation by Davor Novosel: 7:00pm-7:45pm
- Afterwards: YEA Social

Our February meeting entitled "Energy Management in Existing Buildings" featuring Davor Novosel from the National Energy Management Institute (NEMI).

Mr. Novosel is currently the Chief Technology Office for NEMI and brings with him 30 years of international HVAC experience. He holds a Master of Science in Mechanical Engineering degree from the Technical University of Munich, Germany, a Master in Business Administration degree from Northwestern University, Kellogg School of Management, Evanston, Illinois and is a Certified Indoor Air Quality Professional (CIAQP).

As a follow-up to last year, Professor Jin Wen, PhD of Drexel University's College of Engineering will also be sharing her latest ASHRAE sponsored research on VAV terminal control.

A special thanks goes out to MDSystems for helping make this meeting possible with their generous donation to chapter activities. Afterwards: Young Engineers in ASHRAE (YEA) will be having a social event. Pool tables have been reserved and all members 35 years of age or younger are invited.

PRESIDENTS MESSAGE:

I would like to thank everyone who attended the Flyers game night for their attendance and hope all enjoyed the tour and game. There was good feedback from those I talked to and there seemed interest in future events like this. We will work on bringing this type of event in the future.

We welcome SMCA to our joint meeting in February. Please refer to the C-vent invitation for more details. We are still looking for sponsors to our meet-

ings to help us with the costs in order to bring the membership quality topics at quality venues. Please contact me if you would like to sponsor any of our remaining meetings. Just a reminder that anyone who is unemployed and has their resume posted on our website will receive a \$10.00 discount.

Also please contact any board member if you would like to volunteer to help out the chapter. Please see articles within the newsletter for sched-

uled seminars from our CTTC committee and YEA events.

I would like to thank all members who renewed their membership at our recent call-a-thon and encourage those of you who still need to renew to do so.

Hope to see you at the February meeting

Bill Hart

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Direct Contact Heat Recovery Technology

This technical article was submitted by Tozour Energy Systems on behalf of Sofame Technologies. Articles highlighting novel HVAC technologies should be submitted to mmaguire@klingsstubbins.com for consideration in future newsletters.

In an era of fluctuating fuel prices, large consumers of energy are looking at every possible way to keep costs in check. Not only must they control their energy spending they must also meet commitments to greenhouse gas (GHG) emissions reductions.

This double-barrel concern has prompted a new look at a proven technology that has existed for decades but was somewhat overlooked in the 1980's and 1990's when energy was comparatively cheap. It is heat recovery technology, particularly direct-contact heat recovery. The technology has a track record of boosting heating efficiency while significantly lowering GHG emissions.

At a recent conference, Ted Borer, PE, CEM, LEED^{AP}, the plant manager at Princeton University where a direct contact, heat recovery system was recently installed, said, "What we once considered 'good maintenance' is now recognized as financial and environmental stewardship." At the Princeton plant, energy from approximately 300,000 lbs. per hour of waste flue gas is recovered and reused, resulting in a reduction of carbon dioxide (CO₂) production by approximately 5,000 tons per year.

Direct contact heat recovery involves a condensing stack economizer which recuperates the residual heat contained in a boiler's flue gases and transfers this heat to a cold water stream. Hot water is produced at temperatures as high as 140°F.

Cold water enters the unit at the top and is then uniformly distributed over the upper surface of a packing of stainless steel nodules which constitutes the heat transfer zone. The water percolates down through the packing where it comes in "direct-contact" with the rising, hot products of combustion introduced at the bottom of the unit.

Both the sensible and latent heat contained in the gases are transferred to the water. The heated water collecting at the bottom of the unit is then pumped directly to the process, or across a plate and frame heat exchanger to transfer its energy to a process fluid.

Direct-contact heat recovery is nearly 100% efficient. Maximum exiting flue gas temperatures reach no more than 10°F higher than cold water temperatures at inlet. The system requires minimal maintenance. Most condensing units can be installed in a boiler room or on a roof.

A standard, gas fired heating unit found in a hospital, airport or large factory emits 1,650 lbs of GHG per hour. A mid-sized direct-contact heat recovery system emits 1,150 lbs of GHG per hour. Direct-contact heat recovery systems lower GHG emissions by an average 500 lbs per hour.

Direct contact heat recovery is not the only solution for plant managers faced with increasingly stringent operating budgets but it is unquestionably a viable alternative to unbridled increases in energy costs. As the demand for better, more comfortable heating in buildings increases, the technology, which has been proven over the decades, is now widely regarded among consulting engineers and decision-makers as genuine "back-to-the-future" innovation.

YOUNG ENGINEERS IN ASHRAE



Young Engineers Social:

Come join other young engineers from around the region to celebrate Engineers Week 2010 at the Young Engineers Social. Hosted by the Engineers Club of Philadelphia, the event will be Monday, February 15 from 6 to 9pm at Yards Brewery in Philadelphia. The event will recognize ASHRAE's Mike Witkowski, McHugh Engineering Associates as the 2010 Young Engineer of the Year, and provide a venue for young engineers of the Philadelphia area to network and socialize. Guests will enjoy a tour of the brewery, followed by hors d'oeuvres and samples of the brew master's specialty ales. For more information click [here](#).

YEA Social:

The next YEA Social will be after the ASHRAE meeting on February 11th at Dave and Busters. If you're 35 years or under, stick around after the meeting for time of hanging out and playing pool with other young engineers.

YEA Philadelphia has setup a Facebook group for you to join to keep you updated on all the latest information including YEA specific meetings and a forum for young engineers to discuss amongst one another.

The group is located [Here](#)

ASHRAE Philadelphia Chapter Helps Student Learning

On Friday December 18th Mike Witkowski from the ASHRAE Board of Governors personally delivered a science education donation from the Philadelphia Chapter of ASHRAE to the Holy Name grade school in Camden. Mike dropped off several science kits – Chemistry, fossil kits, magnet kit, weather station and a new computer.

Mike's wants to tell our chapter members how the school and students were very appreciative. In his words: Some of the kits apply to things they just learned, other to things they will learn next quarter. Attached are some photos of the 6th graders who helped to carry in the equipment along with the principle is Patricia Quinter.

I received many handshakes from the students and several remarked this is Christmas. From what I learned about the school is these students will most likely not receive any gifts at home, they had a drug house directly across for the school which the police just shut down. Frequently there is police activity outside and the students are to remain in the building. The students are fed breakfast, lunch and a snack there. If they did not get this food most would not eat. It was an incredible feeling to know we helped. We were able to give them activities for class that the school could not afford to buy – Mike.



CHAPTER TECHNOLOGY TRANSFER COMMITTEE

ASHRAE Philadelphia Chapter

presents a workshop on Tuesday, April 20 (8:30am – 5pm) on

APPLYING ASHRAE ENERGY AND INDOOR AIR QUALITY STANDARDS

Hoy Bohanon is a member of the ASHRAE 62.1 committee and will present on the “Ventilation for Acceptable Indoor Air Quality” standard.

Mack Wallace is a member of the ASHRAE 90.1 committee and will be presenting on the “Energy Standard for Buildings Except Low-Rise Residential Buildings” standard.

The fee for the daylong seminar to be held in Philadelphia is \$200.

Both standards are referenced in prerequisites for the LEED-2009 rating system, underscoring the importance of these standards in designing buildings to meet sustainable goals.

Hoy Bohanon, PE, is owner of Bohanon Engineering, LLC, a company that focuses on sustainable improvement of the indoor environment in existing buildings. During his 32-year engineering career, Mr. Bohanon has worked at manufacturing corporations as a product design engineer, project engineer, facilities engineer, facilities manager, indoor air quality researcher, and environmental engineer. He has published papers and articles on indoor air quality and serves as a voting member of ANSI/ASHRAE Standard 62.1 committee, Ventilation for Acceptable Indoor Air Quality. He is a panel leader for the United States technical advisory group that is developing new international standards in ISO TC205 Building Environment Design.

Mack Wallace, P.E. has been a mechanical contractor, consulting engineer, and a registered engineer in Texas for over 30 years. Now registered in over 40 states, Mack has been the engineer of record for many award-winning projects, including the Historic Preservation of the Texas State Capitol Building. He has also served on the review team for the energy efficient buildings research projects supported by the Energy Research in Applications Program for the Texas Higher Education Coordinating Board. Mack is heavily involved on the front lines of the energy conservation industry, having served the past 12 years on the ASHRAE Standard 90.1. He also serves as the liaison between the mechanical and building envelope subcommittees, working with both committees to develop “whole-building approaches to energy savings and sustainable design.

ASHRAE Philadelphia Chapter

Is pleased to accept an offer from Sheet Metal Workers Local 19 for a half-day workshop on Saturday, February 20 on

BALANCING: BEHIND THE SCENES

with presentations on:

Tour of the training center

Biosafety cabinet testing lab

DDC controls station

Water balancing station

Duct-leak testing station

Fee: \$20

Learning Objectives:

- Understand the testing and balancing process to allow faster resolution of field issues
- Understand the value-added of the testing and balancing process in the context of tight construction schedules
- Understand the role of testing and balancing agencies in how buildings are commissioned and retro-commissioned
- Understand how testing and balancing agencies contribute to sustainable-design goals.
- Local 19 has offered this training for the last two years and attendees from those sessions have given good reviews!

ASHRAE Philadelphia Chapter

presents a workshop on Monday, March 15 (8:30am – 5pm) on

DATA CENTER ENERGY EFFICIENCY

with Don Beaty and Dr. Roger Schmidt presenting on:

Thermal Guidelines for Data Centers

Datacom Facility Energy Best Practices

High Density Data Centers – Case Studies and Best Practices

Next Steps - Tracking Results

The \$200 fee includes the daylong seminar, speaker notes, one publication of ASHRAE Technical Committee TC-9.9 and an opportunity to purchase any of the other seven committee publications at a 50% discount.

Roger Schmidt is an internationally recognized expert in the fields of electronic cooling and data center thermal management, with more than 100 patents (granted or pending) in those areas. He has made sustained contributions in cooling IBM's super-computers, high performance servers, client/servers, parallel processors and test equipment through the innovative use of air, water and refrigerants. Under his guidance, a consortium of leaders in data center thermal management was formed. He was inducted into the prestigious National Academy of Engineering (NAE) in 2005. In recognition of his accomplishments and leadership, IBM is appointing Roger as IBM's Chief Engineer for Data Center Energy Efficiency.

Don Beaty started DLB Associates Consulting Engineers in 1980. Don was Chair of ASHRAE Technical Committee TC 9.9 (mission critical facilities, technology spaces, & electronic equipment) from its inception through June 2006. His interest in educating the industry about ASHRAE being the unbiased source of data center cooling material has resulted in Don publishing over 50 technical papers and articles. He also is a frequent presenter on the subject, having presented in 13 countries on the topic of data center cooling. Don is currently International Chair TC 9.9 Committee-Liaisons, Alliances and International Activities. Previously, Don served on ASHRAE TC 90.1 (energy standards committee) from 1993 to 2007 serving in various roles and as Vice-Chair.

PHILADELPHIA CHAPTER PROGRAMS CALENDAR 2009-2010

Date	Location	Topic	Theme	Joint Meeting
1/12/2010	Wachovia Center	Wachovia Center Tour and Flyers game	Refrigeration	
2/11/2010	Dave & Busters	Energy Mgmt. in existing buildings	Student Night & Membership Promotion (YEA Social afterwards)	SMCA
2/20/2010	Local 19	Annual Training session with Local 19		
3/11/2010	TBD	LEED Measurement & Verification	Tradeshow	
3/15/2010	TBD	Data Center Energy Efficiency Workshop		
4/14/2010	Union League	Std. 189.1 High Performance Buildings		
4/20/2010	TBD	62.1 and 90.1 Seminar		
5/13/2010	TBD	Green Building Tour	Past Presidents	
6/4/2010	Northampton Valley CC	Golf Outing		
Mid June 2010	Temple University	2010-2011 Planning Meeting		

ASHRAE CERTIFICATIONS

ASHRAE offers certification programs in five areas:

- Healthcare Facility Design
- High-Performance Building Design
- Operations and Performance Management
- Commissioning Process Management
- Building Energy Modeling (coming in March 2010).

An ASHRAE certification lets employers and clients know that the certification earner has mastered a significant body of knowledge in

a specific aspect of HVAC&R design. A firm that employs ASHRAE certification earners demonstrates a corporate commitment to the professional development of its employees and a dedication to providing the best possible resources for building design projects.

Each category has eligibility standards, which are a combination of educational and experience criteria. After filing an eligibility request and being approved by ASHRAE, a candidate takes an electronically-administered exam at an Applied Measurement Professionals (AMP) testing center. After passing the 2 to 2½ hour test (depending on the

category), the candidate can then claim to be ASHRAE-certified in that area.

ASHRAE offers a recertification process, including an ethics statement and a continuing education requirement. Additional information, including a candidate guidebook, is at ashrae.org/certification.

Mark M. Maguire, PE

Chapter Chair –

Technology Transfer

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

Chapter Technology Award Competition 2010

The Technology Award Program recognizes members for innovative designs, communicate that technology to other members, and highlight achievements to other professionals.

The Chapter Technology Transfer Committee will be accepting applications for the 2010 Chapter Level competition in March 2010 in the following categories:

- Commercial Buildings, New and Existing
- Institutional Buildings, New and Existing
- Health Care Facilities, New and Existing
- Industrial Facilities or Processes, New and Existing
- Public Assembly Facilities, New and Existing
- Residential Buildings, New and Existing (Single Family and Multi-Family)
- Alternative or Renewable Energy Use

Entries will be judged on energy efficiency, indoor air quality and thermal comfort, innovation, operation and maintenance, cost effectiveness, environmental impact and quality of presentation.

The process for the ASHRAE Technology Awards starts right here at the Chapter level. Chapter Competition winners will be judged in the Regional Technology Award Competition. Regional winners will then submit a long form application for the Society Technology Award Competition. Winners of the Society Competition will also be featured in the ASHRAE Journal.

For more information on the Technology Award Program, including application forms please visit the CTTC section of the chapter Website <http://www.ashrae-philadelphia.org/storage/cttc.htm>

Mark M. Maguire, PE
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MEMBERSHIP PROMOTION

New Members for February

Mr. Scott Schaffer- Associate
Mr. Josh J Capparella PE - Associate
Mr. Russell Walters - Member
Mr. Tony D'Elia – Member

New Student Members

Mr. Brian Donovan
Mr. Paul Hallowell
Mr. Michael Reilly
Mr. Trien V Lam
Mr. Zachary James Heilman
Mr. Christopher Scott Putman
Mr. Zachary Polovchik
Mr. Daniel Adam Saxton
Mr. Mitchell Peters

ASHRAE is no longer accepting applications for grade advancement. To advance from associate to member, a member must update their ASHRAE bio online, and notify membership@ashrae.org they have an updated bio and wish to be considered for grade advancement. Tips for updating bios:

- i. Go to www.ashrae.org
- ii. Login
- iii. In Member Central, Click “Update Your Bio”
- iv. Go through each of the small blue tabs to enter demographics, contact information, education, professional registration, etc. It's very easy!

Bob Finkboner
Membership Promotion Chair