



QUAKER CITY CLIMATE

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Penn's Landing Caterers

1301 S Columbus Blvd
Philadelphia, PA 19147
(215) 336-7404

For Directions : [Click Here](#)

Free parking is available on site.

Consulting engineers working at engineering firms and ASHRAE Student Members have free admission and should register directly with Donna Valentine (dvalentine@smca.org or call 610-828-4055) at SMCA. [Refer to SMCA website for registration.](#)

All other ASHRAE members or non-members should register through Hope Silverman at the ASHRAE Philadelphia Chapter office (hope@mmco1.com or 610-971-2169). Please note that the dinner cost of \$90 per person is due in advance of the meeting.

2010 ENGINEER'S NIGHT: FAN WALL TECHNOLOGY

JOINT MEETING WITH SHEET METAL CONTRACTORS ASSOCIATION

Our next dinner meeting is scheduled for **WEDNESDAY** October 6, 2010 at Penn's Landing Caterers. It is a joint event with SMCA. Refer to the sidebar on this page for registration information. The event schedule is as follows :

- Cocktail Reception: 5:00 pm
Full Scale Fan Wall Model
& Vendor Display
- Dinner: 6:30 pm
- Presentation: 7:30 pm

Fan Wall Technology

Fanwall technology is considered one of the most significant advances in airflow technology. A great energy saver, this technology uses an array of smaller fans versus a traditional large fan, which in turn, reduces the footprint of the air handler, allows design flexibility, reduces the system's low frequency noise, and most importantly, reduces energy and costs.

At the 2010 Engineers Night, hosted by the Sheet Metal Contractors Association of Philadelphia and its Vicinity, Coward Environmental Systems, Inc. and Mark Montesanto of Huntair, Inc. will conduct a demonstration of the Huntair Fan-wall System.

CTTC Technology Award Program 2011

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 2011 Chapter Level competition in March 2011 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.

More information on the Technology Award Program will be coming soon.

2010- 2011

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PRESIDENTS MESSAGE:

As summer draws to a close we look forward to our upcoming meeting with the Sheet Metal Contractors Association on Wednesday, October 6th featuring a presentation on fan wall technology. Joint meetings with other organizations offer a good opportunity for ASHRAE members to interact with people in related fields. While the SMCA relationship has been long-standing, in November this year we have our first joint meeting with the Construction Managers Association of America.

Our first meeting of the year went off very well with about 90 people at-

tending. While attendance isn't our only measure of success, it is a good way of judging how well the Chapter is doing in its mission to disseminate technical information to its members. We hope that you'll find the rest of our meetings this year equally interesting. Keep in mind that most of the meetings contain sufficient technical content to count towards the professional development hours needed for PE renewal in Pennsylvania. Many people took advantage of the attendance certificates we provided at the first meeting as a way of documenting their attendance.

A reminder again this month that in order to

maintain the dinner cost to our members at a reasonable rate, we will continue to offer the ability for companies to sponsor dinner meetings this year. For a sponsorship of \$500 your company will get two tickets to the meeting, a six-foot table for a display, and be listed in the newsletter and meeting invites as an event sponsor. We will have two sponsorship opportunities available for each meeting. Please contact me directly if this is of interest.

Best Regards,

John Pardekooper

215-436-5802

Hot-Aisle vs. Cold-Aisle Containment for Data Centers

This article was written by John Niemann, Kevin Brown and Victor Avelar from APC, and submitted by Justin Mazur of APC. Articles highlighting novel HVAC technologies should be submitted to Chapter Technology Transfer Committee Chair Mark Maguire (c021bog4@ashrae.net) for consideration in future newsletters.

Both hot-air and cold-air containment can improve the predictability and efficiency of traditional data center cooling systems. While both approaches minimize the mixing of hot and cold air, there are practical differences in implementation and operation that have significant consequences on work environment conditions, PUE and economizer hours.

- The containment of hot or cold aisles in a data center results in the following efficiency benefits. It is important to note that a hot-aisle/cold-aisle row layout is a prerequisite for either type of containment.
- Cooling systems can be set to a higher supply temperature (thereby saving energy and increasing cooling capacity) and still supply the load with safe operating temperatures. The temperature of room-oriented uncontained cooling systems is set much lower (i.e., approximately 55°F) than required by IT equipment in order to prevent hot spots. Hot spots occur when heat is picked up by the cold air as it makes its way from the cooling unit to the front of the racks. Containment allows for increased cold air supply air temperatures and the warmest possible return air back to the cooling unit. The benefit of higher return temperature to the cooling unit is better heat exchange across the cooling coil, increased cooling capacity and overall higher efficiency. This effect holds true for virtually all air-conditioning equipment. Some equipment may have limits on the maximum return temperature it can handle but in general, all cooling systems yield higher capacities with warmer return air.
- Containment allows cooling unit supply air to reach the front of IT equipment without mixing with hot air. This means that the temperature of the supply air at the cooling unit is the same as the IT inlet air temperature (i.e., uniform IT inlet air temperatures). When no mixing occurs, the supply air temperature can be increased without risk of hot spots while still gaining economizer hours.

[The remainder of the article can be found here.](#)

ASHRAE

AMERICAN SOCIETY OF HEATING, REFRIGERATING AND
AIR-CONDITIONING ENGINEERS, INC. PHILADELPHIA CHAPTER

BASIC HVAC SYSTEM **DESIGN COURSE**

This is a demanding one-year course that introduces students to the fundamentals of HVAC design. Classroom activities will include lectures and problem solving sessions, supplemented by home reading and study assignments.

2010-2011 Course Subjects Include:

Fundamentals and Psychometrics
Load and Heat Transfer Fundamentals
Load Calculations
Pumps, Piping & Piping Systems
Basic Steam & Boilers
Fans, Air Distribution & Duct Design
Refrigeration
Controls & Instrumentation
Equipment Selection

The class is a great way to further, or even begin, a career in HVAC.

Classes will meet Tuesdays and Thursdays from 6:15 PM to 8:30 PM beginning in October and continuing until the end of March. All classes will be held at Drexel University's Center for Automated Technology – located at 3101 Ludlow Street (near 31st and Market Streets).

The Basic Class tuition is \$1,200 (\$1,000 for ASHRAE Members who have paid both their National and Philadelphia Chapter dues). Tuition includes all course materials.

Class size is limited to 30 students. To enroll, complete and submit the application including a **non-refundable** deposit of \$200 payable to "Philadelphia Chapter ASHRAE". Balance due at first course session.

If you would like to receive further information, please contact the Basic Class Coordinator:

James K. Lill, PE
337 David Drive
Havertown, PA 19083
Phone: (610) 645-1956
E-mail: LILLJK@comcast.net

ASHRAE

AMERICAN SOCIETY OF HEATING, REFRIGERATING AND
AIR-CONDITIONING ENGINEERS, INC. PHILADELPHIA CHAPTER

ADVANCED HVAC SYSTEM DESIGN COURSE

This is a demanding course that is designed to help students, draftspersons, designers, engineers, construction managers, etc. gain an in-depth understanding of HVAC design and engineering.

2010-2011 Course Subjects Include:

Code Evaluation
Load Calculation
Psychometrics
Duct Design
Piping Design
Pumping
System Evaluation & Selection
New Technologies
LEED
Controls

The class is a great way to further your career in HVAC.

Classes will meet Wednesdays from 6:15 PM to 8:30 PM beginning in October and continue until the end of March. All classes will be held in Philadelphia.

The Advanced Class tuition is \$1,200 (\$1,000 for ASHRAE Members who have paid both their National and Philadelphia Chapter dues). Tuition includes all course materials.

Class size is limited to 15 students. To enroll, complete and submit the application including a **non-refundable** deposit of \$200 payable to "Philadelphia Chapter ASHRAE". Balance due at first course session.

If you would like to receive further information, please contact the Advanced Class Coordinator:

Jeff Crozier
The Procz Group
10 North Main Street, Suite 301
Yardley, PA 19067
Phone 267-614-6446
jcrozier@proczgroup.com

ASHRAE Philadelphia Chapter

Humidity Control Seminar

a half-day workshop on Thursday, November 4 (1:30–4:30pm) on Humidity Control at the Downtown Club (6th and Chestnut Streets in Philadelphia, PA). The seminar cost is \$250.

Sooner or later, every HVAC designer and every building owner comes up against the problem of how to control humidity with certainty, in an economical way. This course provides a firm foundation for the knowledge which helps interested technical professionals avoid classic problems in buildings caused by excessive or uncontrolled humidity.

Course Outline:

1. The Big Picture - Overall Principles and Roles of Each Team Member
2. Brief Psychrometric Review - From the Perspective of Humidity Control
3. 5-Step Design Procedure - The Most Efficient Path to Economical System Designs
4. Estimating Dehumidification Loads & Sizing Equipment Using the Included Spreadsheet
5. Understanding Equipment Behavior & Locating Sensors and Controls

Course Instructor - Lew Harriman, Fellow, ASHRAE

Lew Harriman is Director of Research at Mason-Grant Consulting in Portsmouth, NH. He is a Fellow of the Society, and is an active member of ASHRAE Technical Committees 1.12 (Moisture Management in Buildings) and TC 8.12 (Desiccant Dehumidification Systems and Components). Lew has 33 years of experience in controlling humidity and moisture in buildings and industrial processes. He was the Lead Author and Project Manager for *The ASHRAE Humidity Control Design Guide*, and for the *ASHRAE Guide for Buildings in Hot & Humid Climates*.

Chapter Technology Transfer Committee

ASHRAE MILTON W. GARLAND AWARD

ASHRAE offers two competition-based awards encouraging the design of innovative refrigeration systems. The Milton W. Garland Commemorative Refrigeration Award for Project Excellence recognizes non-comfort refrigeration systems. The Refrigeration Comfort Cooling Award for Project Excellence is oriented toward comfort refrigeration systems. The Philadelphia Chapter Technology Transfer Committee is currently accepting applications for both competitions for 2011.

The Garland Award competition is open for the design of mechanical refrigeration machinery for applications other than human comfort: e.g., food processing/preservation, industrial/manufacturing processes, life support in extreme environments, recreational facilities.

The Refrigeration Comfort Cooling Award competition is open for the design of mechanical refrigeration machinery for human comfort applications.

Both submissions must be made within 36 months of the initial operating date of the system, and will be judged on the following criteria:

- Complexity of Problem
- Solution Concept
- Architectural Integration
- Originality
- Achievement of Performance Criteria
- Energy Effectiveness
- Budget Compliance

Ease of Maintenance

Additional information can be obtained from Mark Maguire, Chapter Transfer Technology Chair (c021bog4@ashrae.net).

ASHRAE Building Energy Assessment Professional Certification Available in January 2011

ASHRAE has developed the Building Energy Assessment Professional (BEAP) certification program in collaboration with representatives from ASHRAE's Building Energy Quotient (bEQ) program, Illuminating Engineering Society of North America (IESNA), National Institute of Building Sciences (NIBS), Sheet Metal and Air-Conditioning Contractors' National Association (SMACNA), and the Testing, Adjusting and Balancing Bureau (TABB). The purpose of this program is to certify individuals' ability to audit and analyze residential, commercial, and industrial buildings including determining project scope, collecting data, analyzing building performance, interpreting results, evaluating alternatives, submitting recommendations for energy conservation measures, and assisting with the implementation of these recommendations.

The program will launch February 2, 2011 with a pencil and paper examination in conjunction with ASHRAE's 2011 Winter Conference and AHR Expo in Las Vegas. Approximately six weeks after the first exam administration, the exam for that program will be available on computer at proctored testing centers through Applied Measurement Professionals, Inc., which has testing centers in Center City Philadelphia, Wilmington, DE and Robbinsville, NJ.

This is in addition to the five certification programs currently available:

- Building Energy Modeling Professional;
- Commissioning Process Management Professional;
- Healthcare Facility Design Professional;
- High-Performance Building Design Professional;
- Operations and Performance Management Professional.

ASHRAE's certification programs are developed by industry practitioners who understand the knowledge and experience that are expected for superior building design and system operation. The programs support and are supported by the ASHRAE Learning Institute, thereby providing a complete learning process. ASHRAE enjoys a worldwide reputation for being the leader in HVAC&R design and our certification programs serve to reinforce that reputation, which ASHRAE has worked hard to earn and maintain over the past 100 + years.

Additional information is available on the ASHRAE Website at www.ashrae.org/certification. Or you can email the Philadelphia Chapter Technology Transfer Chair (Mark Maguire) at c021bog4@ashrae.net.

PHILADELPHIA CHAPTER PROGRAMS CALENDAR 2010-2011

Date	Location	Topic	Theme	Joint Meeting
9/16/2010	Dave & Buster's	Geothermal Heating and Cooling Systems	Membership/ YEA	
10/6/2010	Penn's Landing Caterers	Fan Wall Technology		SMCA
11/1/2010 - 11/2/2010	Pennsylvania Convention Center	Engineered Plumbing Exposition 2010 ASPE Flyer Registration Form		
11/4/2010	Downtown Club	Communicating Technical Ideas with Levity	Research Promotion	CMAA
12/9/2010 Breakfast	Union League	Energy Simulation Programs		
1/20/2010	Wells Fargo Center	Flyers VS Ottawa Social		
2/10/2010	TBD	TBD	Membership/YEA/Student Night	
3/10/2011	TBD	Design, Build for Green Buildings	Vendor Show	SMCA
4/14/2011	TBD	Variable Air Volume System Design	Student Night	
5/12/2011	TBD	Variable Primary Flow	Past President's Night	
TBD	NVCC	Golf Outing		
TBD	TBD	2011-2012 Planning Meeting		

**** Program calendar is subject to change. Please refer to [ASHRAE Philadelphia Website](#) for up to date information.**

SEPTEMBER'S MEETING: GEOTHERMAL HEATING AND COOLING



Gipe Associates, Inc.
CONSULTING ENGINEERS

Geothermal Heating and Cooling Fundamentals ASHRAE – Philadelphia Chapter

Geothermal Heating and Cooling –
Is It Right for your Building or House?

By: David R. Hoffman, P.E.,
LEED AP, Cert. Geo. Designer
Gipe Associates, Inc.





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

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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:

Matthew Trinsey
Clive Samuels & Associates, Inc.
1 Independence Way
Princeton, NJ 08540
(P) 609-627-7983
c021ne@ashrae.net

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

YOUNG ENGINEERS IN ASHRAE



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

The group can be found [here](#).



MEMBERSHIP PROMOTION

New Members

Len Zimmerman

Robert Darling

New Associate Members

Debbie McMichael

Casey Younkins

Christopher Marci

Carter Membrino

Matthew Sholomskas

Joseph Wrinn

Marc Antonioli

Tracy Rocco

New Student Members

Peter Attalla

Justin Barta

Josiah Bio

Frank Bolger

Nicholas Calcagni

Kenneth Carter

Dat Dougn

Maurice Gans

Rechab Gray

Shan Helm

Patrick Henry

New Student Members

Alexander Hosko

Jason Isles

Heera Jose

Matthew Judge

Daniel Kim

Michael Lukas

Rami Moussa

Robert Nazian

Ankit Patel

Harsh Patel

Noel Prodigalidad

Vincent Pugliese

Francois Sagma

Benjamin Sauers

Michael Stanoch

Tyeisha Thomas

Keyur Vekaria

Lawrence Wyatt

Bin Yan

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!

James Piscopo
Membership Promotion Chair