



[American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc.](http://www.ashrae.org)

## **ASHRAE**

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### **Dayton Chapter**

PO Box 3202 Dayton, OH 45401

<http://www.daytonashrae.org>

## **Young Engineers in ASHRAE**

*A Special Meeting for those 35 and under!*

# **Primary-secondary/Variable-primary Chilled Water Control Sequences**

**11:30 Lunch**

**12:00—12:45 Program**

***FREE* for members and prospective members 35 and under**

**All others \$20 at the door**

## **September 14, 2009**

**Engineer's Club of Dayton**

**110 East Monument Avenue**

**RSVP: By Thursday, September 11, 2008, 12 noon**  
**Jeremy Fauber at [JPFauber@heapy.com](mailto:JPFauber@heapy.com) or 224-0861**

Engineers from Innovative Energy Solutions will provide an overview of the operation of variable flow chilled water systems, including an overview of system operation, best practices for locating sensors and flow meters, and recommendations on types of sensors, valves and flow meters that work best.

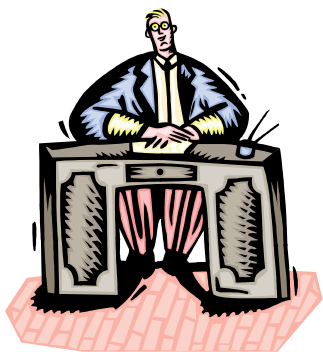
Speakers: Kyle Schroeder, P.E., Sales Engineer with 18 years experience in the HVAC Controls Industry and Dave Hacker, Engineering Manager with 15 years experience in the HVAC Controls Industry

**Free gifts for membership sign-up at meeting!**

***Door Prize Drawings for Starbucks Gift Cards***

***Note: this meeting is not part of the regular meetings  
paid for by annual local dues.***

**Don't miss out—make reservations now!**



## Presidential Ponderings

Once again the Dayton Chapter sent a good size group to the Chapter Regional Conference (CRC) at the end of July. We were able to get ideas from other chapters in the region and to prepare for the upcoming

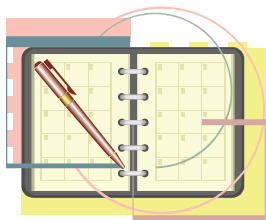
year. Special acknowledgement to Russ Marcks for receiving the Chapter Service Award. The chapter is very grateful for Russ's years of service that include many years as the Student Activities Chair, the chapter webmaster, and his time as president of the chapter. The Dayton Chapter also did well in many areas including receiving honor roll, star and special citation for PAOE, and research promotion received full circle, high five, goal and challenge. Once again the Dayton Chapter can be proud of its past accomplishments.

September brings our first local meeting of the year and our meeting for the Young Engineers in ASHRAE (YEA). This meeting is devoted to existing members or future members of ASHRAE who are 35 years old and younger. (although all else are welcome—see front page for details). ASHRAE presents many opportunities to our members, including the sharing of technical information, opportunity for professional growth, networking, continuing education, plus many other benefits. YEA represents the future of our chapter, and the future of Society ASHRAE, so if you are a mentor to or you know of a young coworker in your office please invite them and encourage them to attend our meeting on September 14<sup>th</sup>.

Jeremy Fauber, PE, Leed AP

## Upcoming Board Meetings:

Meetings are held at 8 AM on the third Thursday of the month at Heapy Engineering. Bill's Donuts and fresh coffee are always available. Next meetings:



September 17, 2009  
October 15, 2009  
November 18, 2009  
December 17, 2009

## Mini-ASHRAE Show Coming October 20th!

## Coming Events 2009/2010



**September 14, 2009**—Lunch—Young Engineers in ASHRAE - Primary-Secondary/Variable primary chilled water control sequence.

**October 20, 2009**—Mini-ASHRAE Show and program, Sinclair Community College—Membership Promotion night and Student night. Featured speaker: tom Werkema, on the Science of Carbon Counting.

**November 9, 2009**—Dinner—Research Promotion Donor Recognition Night—Dessicant dehumidification for OR applications

**December 14, 2009**—Lunch—Facility Insulation

**January** \_\_\_ Social Event

**January 23-27, 2010**—ASHRAE Winter Meeting, Orlando, FL

**February 8, 2010**—Lunch— Central Geothermal Systems

**March 8, 2010**— Tour TBD

**April 12, 2010**— TBD

**April 14, 2010**—ASHRAE Webcast

May—Golf Outing

## Education News:

Need to learn REVIT MEP? Take CAT 202 Fall Quarter, 5-6:50 PM on Tuesday/Thursday at Sinclair Community College. No prior knowledge of REVIT Architectural is required. Contact Mike Freed at 512-5012 or Nora Adams at 512-2183 and sign up today! Classes start on Wednesday, September 9th. Tuition is only \$45/hour (x3 hours) for a Montgomery County Resident! **What a deal!**



## Research Promotion News

Last year we met our research goal, raising over \$7000 for ASHRAE Research. That effort included only 13 individuals.

You were challenged to improve that number and you did, by 38%, giving us contributions by 21 individuals. (With overall corporate donors down from the past year, this and a major contribution by Emerson made all the difference, allowing the chapter to exceed its research promotion goal by 34% and last year's total by 43%). How about next year we go for 30 individual donors? Note additional donor recognition on page 5 and article on Research on page 7.



**Way to go, Dayton!**

**Coming Soon!**  
**Mark your calendars for  
October 20th for the  
Dayton Mini-ASHRAE Show**



**Sinclair Community College  
Building 12**

**Booth locations assigned as you sign up—  
sign up early for the best spots!**

**Email Bruce Knapp at  
cbknapp@heapy.com**



**Affiliate societies and organizations can display society information for free in exchange for publicizing to their members**

**Don't be left out in the cold—contact Bruce now and reserve your spot today!**

**Detailed schedules next month!**



*The Official Jobs Board for the American Society of  
Heating, Refrigerating and Air-Conditioning Engineers*

Welcome to [ASHRAEJobs.com](http://ASHRAEJobs.com)

Your source for HVACR Engineering Careers

**ASHRAE jobs**



# Research Promotion Honor Roll 2008-2009

## Corporations

### PLATINUM

*Emerson Climate Technologies*

### GOLD

*Waibel Energy Systems*

*Ramsay Cohron Mechanical Equipment*

### SILVER

*Heapy Engineering*

*Uptime Solutions Associates*

### BRONZE

*Allied Supply*

*Contech Design*

*Helmig Liensch LLC*

*Weber Huff*

## Individuals

### HONORS

*Richard L. Pavlak Colleen Haun Jeremy Fauber*

*Larraine Kapka Greg Cohron Denny Lammlein*

*John R. Patterson, Jr. Frank Mauro Tom Ferdelman*

*Russ Marcks Mark Rapier Sidney Hagan*

*James Davidson Joseph S. Ferdelman*

### DONORS

*Richard B. Pavlak Tom Monnig Michael Kirchens*

*David Bills Kevin Ropers Mike Wiznewski*

*Robert Hartley*

# DAYTON ASHRAE



# 2009-2010 ASHRAE RESEARCH Dayton ASHRAE

## Contribution Form

Last year was a good year for the Dayton Chapter, but we can't let down now! With so much work to do to reach ambitious energy consumption reduction goals, more research is needed than ever before! You can help make the difference!

This industry gives all of us our livelihood. ASHRAE's research and educational programs are what keeps our industry and profession on the leading edge and assures its continued existence. Confident that you will recognize the benefits of this investment, I am asking you to help fund future HVAC&R research and development.

Amount enclosed:  \$250  \$150  \$100  \$50  Other (specify) \_\_\_\_\_

Name: \_\_\_\_\_

Address: \_\_\_\_\_  
\_\_\_\_\_

Phone Number: \_\_\_\_\_

Member Number (If known): \_\_\_\_\_

Do you want to be recognized in the Dayton newsletter as a contributor? (circle) YES NO

Mail completed form with your check, payable to ASHRAE Research to:

Denny Lammlein  
29 Sandelwood Street  
Springboro, OH 45066





For Release:  
August 5, 2009  
678-539-1216

Contact: Jodi Dunlop  
Public Relations  
[jdunlop@ashrae.org](mailto:jdunlop@ashrae.org)

## ASHRAE Research Targets Tying Together BIM, Energy Efficiency

ATLANTA – Ensuring that a common language of “energy efficiency” is spoken by both building information modeling software used by architects and energy analysis and simulation software used by engineers is the goal of new research funded by ASHRAE.

The project will develop open-source reference models by which developers may test their solutions to interoperability between BIM and energy simulation software. The project will focus on the most common thermal features in buildings assumed to have the greatest impact on energy use, and provide guidelines for describing thermal models extracted from BIM and the rules for extracting those models used in whole building energy analysis applications.

“This research will promote the inclusion of energy efficiency measures in the early design of building model development,” said Mark Clayton, Ph.D., principal investigator for the project. “It is expected to greatly increase the efficiency and accuracy of energy analysis and allow building designs to achieve higher levels of energy efficiency.”

The project is one of 13 approved for funding by ASHRAE at its 2009 Annual Conference, totaling some \$1.6 million.

ASHRAE Research Project 1468, *Development of a Reference Building Information Model (BIM) for Thermal Model Compliance Testing*, was awarded to Texas A&M University. The \$175,311 project is expected to take 15 months to complete. It is sponsored by ASHRAE’s technical committee (TC) 1.5, Computer Applications.

Studies have shown that problems related to exchanging information among various building design software systems causes more than \$16 billion per year of unnecessary expense. Given that new computer technologies for representing buildings are expected to transform the processes for architectural engineering design services, it is imperative that standards for data exchange among disparate software systems be established, according to Clayton, the associate director of the Center for Housing and Urban Development at Texas A&M.

“Consequently, the research will enable ASHRAE to foster standard for interoperability between various BIM software systems and energy simulation systems and address some of the costs attributable to poor interoperability,” said Clayton. “More significantly, improved interoperability is expected to improve the quality of design and the energy efficiency of buildings.

Other projects approved for funding are:

- *Development of Design Tools for Surface Water Heat Pump Systems*, RP-1385, Oklahoma State University, two years, \$193,132, sponsored by TC 6.8, Geothermal Energy Utilization
- *Measuring, Modeling, Analysis and Reporting Protocols for Short-Term M&V of Whole Building Energy Performance*, RP-1404, Milwaukee School of Engineering, two years, \$199,512, sponsored by TC 4.7, Energy Calculations
- *Stability of Candidate Lubricants for CO<sub>2</sub> Refrigeration*, RP-1409, Spauschus Associates, one year, \$46,200, sponsored by TC 3.2, Refrigerant System Chemistry
- *Ventilation Requirements for Refrigerating Machinery Rooms*, RP-1448, CPP Inc., 18 months, \$93,368, sponsored by TC 4.3, Ventilation Requirements and Infiltration
- *Balancing Latent Heat Load Between Display Cases and Store Comfort Cooling*, RP-1467, University of Colorado-Boulder, two years, \$167,425, sponsored by TC 10.7, Commercial Food and Beverage Cooling Display and Storage. The Air-Conditioning, Heating and Refrigeration Institute (AHRI) is contributing \$100,000 toward the project.
- *Thermal Comfort in Commercial Kitchens*, RP-1469, KEMA Inc., two years, \$350,000, sponsored by TC 5.10, Kitchen Ventilation
- *Measuring Air-Tightness of Mid- and High-Rise Non-Residential Buildings*, RP-1478, Wiss, Janney, Elstner Associates Inc., two years, \$150,000, sponsored by TC 4.3, Ventilation Requirements and Infiltration
- *Binary Refrigerant Flame Boundary Concentrations*, RP-1507, Safety Consulting Engineers Inc., one year, \$87,500, sponsored by TC 3.1, Refrigerants and Secondary Coolants
- *Establishment of Design Procedures to Predict Room Airflow Requirements in Partially Mixed Room Air Distribution Systems*, RP-1522, Building Energy and Environmental Engineering, two years, \$104,500, sponsored by TC 5.3, Room Air Distribution
- *Establishing Benchmark Levels and Patterns of Commercial Building Hot Water use*, RP-1544, Research Quality and Design Engineering, 18 months, \$190,000, sponsored by TC 6.6, Service Water Heating
- *Effects of Fin Design on Frost and Defrost Thermal Performance of Micro-Channel Heat Exchangers*, RP-1589, Oklahoma State University, 18 months, \$137,065, sponsored by TC 8.4, Air-to-Refrigerant Heat Transfer Equipment
- *Implementation of Total Cost of Ownership Principles into Higher Education as an Integrated Decision Making Tool*, RP-1590, APPA (Association of Physical Plant Administrators of Universities and Colleges), one year, \$125,000, sponsored by TC 7.8, Owning and Operating Costs

*ASHRAE, founded in 1894, is an international organization of some 50,000 persons. ASHRAE fulfills its mission of advancing heating, ventilation, air conditioning and refrigeration to serve humanity and promote a sustainable world through research, standards writing, publishing and continuing education.*

**RP SUPPORT PAYS OFF GREAT DIVIDENDS: REGION V  
CLINCHES A QUARTER OF ALL ASHRAE RESEARCH PROJECTS  
AWARDED IN 2009!**

*By Filza Walters, Region V RVC for RP*



The stock market may not be on the rise, but Region V's efforts, support and dividends from each dollar we sent to ASHRAE in support of Research Promotion is paying off – BIG TIME!

At the Winter Meeting in Chicago, eight new research projects were awarded.

These projects, funded by contributions to ASHRAE Research, were developed by ASHRAE's Technical Committees (TCs) and were bid out in the fall. The work will be conducted by universities and private research groups in eight different states.

**Of the eight new research projects, two (a quarter) of those will be conducted in our back yards! They were awarded to folks in our chapters. So, if you have not made your contribution to Research Promotion yet, there's still time. See page 5 for information on how to donate and support your local chapter's quest to raise funds for RP. Congratulations to all our winners and RP supporters!**

The projects are:

1335-RP *Effects of Typical Inlet Conditions on Air Outlet Performance*, awarded to the University of Nevada, Las Vegas. Sponsored by TC 5.3 – Room Air Distribution.

1344-RP *Cleanroom Pressurization Strategy Update – Quantification and Validation of Minimum Pressure Differentials for Basic Configurations and Applications*, awarded to Engsysco, Inc. of Ann Arbor, MI. Sponsored by TC: 9.11 - Clean Spaces.

1360-RP *How Do Pressure Drop, Efficiency, Weight Gain and Loaded Dust Composition Change throughout Filter Lifetime*, awarded to RTI International of Research Triangle Park, NC. Sponsored by TC 2.4: Particulate Air Contaminants and Removal Equipment.

1383-RP *Develop a Radiant System Module for the Simulation and Analysis of Spaces and Systems*, awarded to Wrightsoft Corporation of Lexington, MA. Sponsored by TC 6.5 -Radiant Heating and Cooling.

1455-RP *Advanced Control Sequences for HVAC Systems – Phase I Air Distribution and Terminal Systems*, awarded to Taylor Engineering, LLC of Alameda, CA.

**1509-RP *Study the Degradation of Typical HVAC Materials, Filters and Components Irradiated by UVC Energy*, awarded to University of Dayton Research Institute, Dayton, OH. Sponsored by TC 2.9 - UV for Air and Surfaces.**

1460-RP. *Design Specifications for Wet-Bulb Aspirator Apparatus*, awarded to the University of Wisconsin, Madison. Sponsored by TC 1.1 – Thermodynamics and Psychrometrics.

1487-RP, *The Development of Simplified Rack Boundary Conditions for Numerical Data Center Models*, to the University of Colorado, Boulder, CO. Sponsored by TC 4.10 Indoor Environment Modeling.

## **BREAKING NEWS!**

**Dayton Chapter #1 in Research Dollars Raised in Region V for 2008-2009,  
#5 Internationally Among Similar-sized Chapters!**



**ASHRAE jobs**

The Official Jobs Board for the American Society of  
Heating, Refrigerating and Air-Conditioning Engineers

Welcome to [ASHRAEJobs.com](http://ASHRAEJobs.com)  
Your source for HVACR Engineering Careers





AMERICAN SOCIETY OF HEATING, REFRIGERATING AND AIR CONDITIONING ENGINEERS

*Advancing HVAC&R to serve humanity and promote a sustainable world*

PRESENTING  
**MINI-ASHRAE PRODUCT SHOW**

A unique opportunity to review the "latest and greatest" innovations in HVAC&R equipment and technology is coming to Dayton. Owners and operators, architects, engineers, contractors and professionals will converge to see, hear and discuss current issues in the building industry first-hand. Thomas "Tom" Werkema, director of government activities for Arkema Inc.'s North American Fluorochemicals Division and ASHRAE Distinguished Lecturer, will be the capstone speaker for the evening. For the past 15 years, Mr. Werkema has been involved in and attended United Nations meetings of the Montreal Protocol on Substances that Deplete the Ozone Layer, Stockholm Convention on Persistent Organic Pollutants and the Kyoto Protocol on Climate Change. Mr. Werkema is an internationally known expert on Climate Change and Ozone Depletion science and politics.

**THIS EVENT IS FREE AND OPEN TO THE PUBLIC.**

**Sponsored by Dayton ASHRAE Chapter.**

**Tuesday, October 20, 2009, (3:00 - 8:00 p.m.)**

**Sinclair Community College Ponitz Center - Dayton, Ohio**

**FOR MORE INFORMATION, PLEASE CALL BRUCE KNAPP 937-224-0861.**



# Dayton Chapter ASHRAE

<http://www.daytonashrae.org>

## Membership Application and Roster Information 2009-2010

\_\_\_\_\_  
Your Name

\_\_\_\_\_  
Your Company Name

\_\_\_\_\_  
Home Address

\_\_\_\_\_  
Business Address

\_\_\_\_\_  
City State Zip

\_\_\_\_\_  
City State Zip

( ) - \_\_\_\_\_  
Home Phone Spouse Name

( ) - \_\_\_\_\_  
Business Phone Ext. Fax Number

\_\_\_\_\_  
Home e-mail address

\_\_\_\_\_  
Business e-mail address

**SEND NEWSLETTER TO:** Home Address Home email address Business Address Business email address

I prefer Lunch Meetings \_\_\_ I prefer Dinner Meetings \_\_\_ I have no preference \_\_\_\_\_

**Chapter achievements are accomplished through active committee involvement. If you would like to promote your Society by serving as a committee chair or assist on one of the chapter committees, please indicate in which committee you are interested below. Please indicate your first preference by number 1 and so on.**

- Education  Membership  Research  Historian  Newsletter  Chapter Office
- CTT (Refrigeration; Technical, Energy & Government; Programs)  Golf Outing  Communication
- Holiday Party  Honors & Awards

### Please Check Your Preferred Roster Affiliation

Consultant  Contractor  Industry/Government  Retired

**Education** Student: School \_\_\_\_\_ Degree \_\_\_\_\_ Approximate Graduation Date \_\_\_\_\_

**Wholesalers, Manufacturer's Rep/Sales Offices, Fill in trade names of products you represent below**

Air Devices		Louvers and Dampers
Air Handlers		Make-Up Air Units
Boilers		Packaged A/C
Building Automation		Pre-Insulated Pipe
Chillers		Pumps
Coils		Sound Attenuation
Computer Room Equipment		Steam Specialties
Cooling Towers		Air Terminal Units
Ductwork		Thermal Storage
Dust Collection		Unit Heaters
Fans		Unit Ventilators
Fan Coil Units		Vibration Isolators
Filtration		Valves
Heat Exchangers		Variable Speed Drives
Heating Equipment		Water Source Heat Pumps
Humidity Control		Water Treatment
Kitchen, Laboratory Fume Hoods		Other

*Dayton Chapter ASHRAE dues for the Society year beginning July 1, 2009 and ending June 30, 2010 are \$95 per year. Dayton Chapter ASHRAE dues include 6 dinner/lunch meetings, and both you and a guest for the holiday event. \* Note: Be sure to begin paying Local dues when you pay your National Dues.*

**Please return this application and a check or money order in the amount of \$95 made payable to Dayton ASHRAE to:**

**DAYTON ASHRAE, PO Box 3202, Dayton, OH. 45401**

**Paid local dues with your annual dues? Please return the form anyway!**