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ASHRAE – Memphis Chapter
http://www.ashraememphis.org/

February 2009

LUNCH MEETING

TUESDAY, February 10, 2009—11:30 AM
Meeting Location:
Kemmons Wilson Center
3700 Central Avenue

Topic will be ASHRAE Standard 62 and IAQ

This months speaker will be Christopher O. Muller

Christopher O. Muller is the Technical Director at Purafil, Inc. (Doraville, GA) and is responsible for technical support services and various research and development functions. Prior to joining Purafil, he worked in the chemical process and pharmaceutical manufacturing industries in quality assurance/ quality control.

He has written and spoken extensively on the subject of environmental / indoor air quality and the application and use of gas-phase air filtration and counts over 100 peer-reviewed papers and articles, more than 30 seminars, and 7 handbooks to his credit. He has edited chapters in two handbooks on the application and use of gas-phase air filtration, wrote the chapters on gas-phase air filtration in the NAFA Air Filtration Handbook and Carrier Corporation's Applications Technical Development Program and a chapter on airborne molecular contamination in the Semiconductor Manufacturing Handbook published by McGraw-Hill.

He testified before OSHA on proposed Indoor Air Quality Standard and has consulted on the preparation of Dutch and Italian governmental standards for indoor environments and has worked closely with many state and national agencies in the U.S. and abroad to develop and implement indoor environmental control strategies for airborne contaminants.

He is one of only 49 ASHRAE members named as a Distinguished Lecturer and is a frequent speaker at ASHRAE Chapter and Regional meetings, both domestically and abroad. He has also received the Distinguished Service Award. He is Chair of ASHRAE Standard Project Committee 145P, which is developing industry standards for assessing the performance of media and equipment used in gas□phase air filtration systems. He is a voting member of Standing Standard Project Committee 62.1 □ Ventilation for Acceptable Indoor Air Quality, serves on the Education subcommittee, and is a co-author of the Standard 62.1-2004 User's Manual. He is also a voting member of Technical Committee 2.3 □ Gaseous Air Contaminants and Gas Contaminant Removal Equipment.

Other memberships include:

- American Society for Testing and Materials – Committee D22.05 on Indoor Air and Committee D.28.04 on Activated Carbon
- Air & Waste Management Association – Indoor Air Quality Committee
- Air-Conditioning and Refrigeration Institute – Air Filters Section
- International Society of Indoor Air Quality and Climate – Task Force III on Indoor Air Quality in Museums
- International Standards Organization – Technical Committee 142: Working Group 8 on Gas-Phase Air Cleaning Devices for General Ventilation.
- Senior member of the Institute of Environmental Sciences and is a member of Working Group CC008 on Gas Phase Absorber Cells.

He received his B.S. in Applied Biology with a minor in Chemistry from Georgia Tech and has done postgraduate work in Industrial Engineering.

MEMPHIS CHAPTER CONTACTS

PRESIDENT:
David Branham: 937-1720

PRESIDENT ELECT
Russ Fletcher: 761-0885

PROGRAMS / CTTC:
Joey Matlock: 452-2500

SECRETARY:
Ryan Hertter: 827-8016

TREASURER:
Steve Stephens: 365-4936

MEMBERSHIP:
James Fleck: 384-8400

NEWSLETTER EDITOR:
Brian Schaffler: 345-6100

WEBMASTER:
Kevin Crosby: 345-6100

STUDENT ACTIVITIES:
Russ Phillips: 348-2853

$100.00 CASH DOOR PRIZE TO BE GIVEN AWAY!

ONE TICKET PER EACH ATTENDEE.

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THE PRESIDENTS CORNER

I would like to express that many of our members go unrecognized for their hard work and efforts put forth in promoting ASHRAE. David George is our Chapters Honors and Awards Chair, please contact David if you have any questions.

This information briefly describes awards annually conferred by the Society. All awards fall into one of six categories and are listed by category, as follows:

(1) Personal Honors
(2) Personal Awards for General Society Activities
(3) Personal Awards for Specific Society Activities
(4) Paper Awards
(5) Society Awards to Groups or Chapters
(6) Chapter and Regional Awards

ASHRAE HONORS AND AWARDS PROGRAM

This information briefly describes awards annually conferred by the Society. All awards fall into one of six categories and are listed by category, as follows: (1) Personal Honors; (2) Personal Awards for General Society Activities; (3) Personal Awards for Specific Society Activities; (4) Paper Awards; (5) Society Awards to Groups or Chapters; (6) Chapter and Regional Awards.

Nominations for Personal Honors and Personal Awards for General Society Activities may be made by chapters, regions, committees or individual ASHRAE members. Nominations for Personal Awards for Specific Society Activities and Society Awards to Groups or Chapters are made by the committee which sponsors the award. Recommendations for Paper Awards are made by the Society Program Committee. Nominations for Regional Awards are made by the delegate from a candidate's chapter at the Chapters Regional Conference (CRC).

Nominations must be received at Headquarters by the required deadline. Information which follows will have specific award deadline dates. Additional information and nomination forms may be obtained from the Honors and Awards webpage at www/ashrae.org/honors.

HOW TO NOMINATE

Nominations for Personal Honors and Personal Awards for General Society Activities must be submitted in electronic format (adobe.pdf). Nominations for Personal Honors should include a letter of nomination from a sponsor (chapter, region, committee or ASHRAE member) that clearly addresses specific contributions and a current ASHRAE Biographical Record. A digital photograph of the nominee is required with most Personal Honors and Personal Awards for General Society Activities. Refer to Honors and Awards webpage for more details.

Nominations for Regional Awards must include current ASHRAE Biographical record listing service rendered and the year of accomplishment.

Refer to Honors and Awards webpage for deadlines. All nominations should be sent to the following address:
ASHRAE Headquarters
Attention: Honors and Awards Committee
Staff Liaison
1791 Tullie Circle, N.E.
Atlanta, GA 30329-2305
Phone: 678/539-1128
Fax: 678/539-2128
rdouglas@ashrae.org

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OFFICERS & CHAIRS

Continued from Page 1

Research/Promotion:	Keith Mayes 901-481-7988
At-Large BOG:	Bill Dudley 901-595-3959
At-Large BOG	Rodney Lum 901-682-7727
At-Large BOG	Davie Lloyd 901-937-1720
Chapter Memorials	Ken Jack 901-324-6610
Nominations	David George 901-373-5100
Refrigeration	Bill Jason 901-323-4899
Historian	Jerry Gatlin 901-452-2500
Christmas Party	Jimmy Fleck 901-384-8400
Golf Tournament	David George Stan Wilson Keith Mayes 901-373-5100

NOTICES

ASHRAE Endorsed Events

Update your Membership Information

Please update your email, phone #s, and contact information by logging in at www.ashrae.org

http://www.ashrae.org/template/MemberLinkLanding/category/1570

Manage Your Membership
Manage Personal Information
Address Changes

The Memphis Chapter Newsletter mailing list and roster are based on those records.

ASHRAE Technology Awards Program

The purpose of the ASHRAE Technology Awards program is to:

1. Recognize ASHRAE members who design and/or conceive innovative technological concepts that are proven through actual operating data;
2. Communicate innovative systems designs to other ASHRAE members;
3. Highlight technological achievements of ASHRAE to others, including associated professionals and societies worldwide, as well as building and facility owners.

Each year the Society may present awards in seven 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 (New and Existing); Residential (New and Existing); Alternative or Renewable Energy Use.

For each category a first, second, and honorable mention winner may be named. Also, one of the category first place winners may be selected to receive the ASHRAE Award of Engineering Excellence. The recipient will have demonstrated the best overall compliance with the judging criteria.

Technology Award Program Overview, Requirements, Judging Criteria and Helpful Hints

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MEMPHIS CHAPTER EVENTS

On Wednesday, April 22, 2009, ASHRAE's Chapter Technology Transfer Committee (CTTC) will present a satellite broadcast and simultaneous webcast "Clean, Lean and Green – IAQ for Sustainable Buildings."

Online registration for site coordinators and webcast viewers begins March 2nd at www.ashrae.org/iaqbroadcast. Registration for satellite viewers begins March 16th. Information about the program and speakers is available at www.ashrae.org/iaqbroadcast.

Three (3) PDH credits may be granted to those who view the program and then complete the Participant Reaction Form online by April 30, 2009.

An electronic flyer for download is available at http://www.ashrae.org/docLib/20090204_IAQFlyer.pdf to assist with promotion of the broadcast program. Please watch for updates via ASHRAE Insights and www.ashrae.org.

If you have questions, call (678) 539-1206 or email ashrae-SatelliteBroadcast@ashrae.org.

ASHRAE MEMBERSHIP GROWTH

Please inform colleagues interested in becoming members of ASHRAE to log on to http://www.ashrae.org to fill out an electronic application. Once at the site click on "Join ASHRAE" on the left side of the page then scroll down to the appropriate application for the desired membership grade (This link will take you directly to the membership application selection page - http://www.ashrae.org/template/AboutLinkLanding/category/1872;jsessionid=aaaglphErs1BeQ) .

Also, have each interested colleague go to the Memphis Chapter Internet site (http://www.ashraememphis.org/page2.html) and fill out a local chapter application. If the prospective members do not have internet access just have them contact me directly and give me their mailing address for me to send hard copies.

Total dues are $150 National and $95 local. Local dues are only $15 if they will not attend the lunch meetings.

Please feel free to call or write with any questions.

James Fleck, P.E.
(ASHRAE Membership Promotion Chairman)
Gala Engineering
Phone: (901) 384-8400
Fax: (901) 373-2255

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TECHNICAL ARTICLE

ASHRAE Technology Awards Highlight Outstanding Building Projects

CHICAGO – Designers of systems for a community center, a school, an office building and a governmental building are recognized by ASHRAE for incorporating elements of innovative building design.

Recipients of the ASHRAE Technology Awards were recognized at the Society's 2009 Winter Conference being held this week in Chicago. The recipients have applied ASHRAE standards for effective energy management and indoor air quality.

"ASHRAE Technology Awards are awarded for innovative HVAC&R designs that provide superior energy, economic, air quality and environmental performance through application of new technologies, new design concepts or by applying existing technologies in unusual ways," Bert Phillips, chair of the judging panel, said. "Innovation involves risk for owners and designers, requiring designers to work outside their comfort zone. Through the Technology Awards, ASHRAE recognizes innovation that works, honors the innovators and shares their design concepts with the broader HVAC&R community."

Following are summaries of the winning projects.

4200 St. Laurent Office Tower

Kenneth Sonmor, Ecovision Consulting, Montreal, Quebec, Canada, receives first place in the existing commercial buildings category for his retrofit of a 13-floor office tower, 4200 St. Laurent Office Tower, Montreal.

Sonmor made several energy-saving proposals related to energy measurement systems/direct digital controls, mechanical systems and electrical measures as part of a detailed energy audit. Among the most innovative measures was a heat recovery apparatus that preheats entering fresh air. The system is made up of two different heat recovery units – a patent-pending thermosiphon heat exchanger that uses an environmentally friendly refrigerant to transfer heat from the exhaust air into the fresh air supplied by the fresh air unit. The second unit transfers the heat of the warm water from the fan-coil condensers into the fresh air supplied by fresh air unit.

The natural gas savings are estimated at 62 percent, with electrical savings estimated at 16 percent of original electrical consumption and a reduction of 700 tons of CO2. With estimated annual savings of around $158,000, the project will pay itself back in a little over two years.

Centre Communautaire de Mistissini

Laurier Nichols, P.E., Dessau, Montreal, Quebec, Canada, receives first place in the new public assembly category for Centre Communautaire de Mistissini, Mistissini, Quebec, Canada.

The objective in building the community center was to design a building that would comply with sustainable development principles while providing high energy efficiency. The center houses an ice arena, which traditionally has high energy bills due to simultaneous heating and cooling load and high refrigeration needs. To reduce energy costs, Nichols selected an HVAC system comprised of heat pumps connected to a geothermal loop. Most arenas use chillers with standard condensers to produce and maintain the ice with extracted heat rejected through air condensers. In this project, rejected heat is reused as much as possible to meet the arena's heating load.

The building reports an energy reduction of 62 percent using geothermal energy, heat recovery and other energy efficient equipment and strategies. The cost savings are some $154,000 a year. Through use of a life-cycle cost approach, greenhouse gas emissions were reduced by 350 tons a year compared to an equivalent community center built to minimum requirements.

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TECHNICAL ARTICLE

HVAC Renovations – George Washington Carver Elementary School

Thomas H. Durkin, P.E., Durkin and Villalta Partners Engineering, Indianapolis, Indiana, receives first place in the existing institutional buildings category for HVAC renovations at George Washington Carver Elementary School, Indianapolis.

When the school was first built in 1935, an underground stream was inadvertently intercepted. The ground water was seen as a liability due to power outages that disabled sump pumps and flooded the boiler room. In 2005, the school system added cooling to the building and the ground water became an asset, used as a geothermal heating-source and cooling sink. The ground water serves as condenser cooling water for a central chiller when air conditioning operates. When heat is needed, water flow through the same central chiller is switched with the ground water going to the evaporator and the building loop on the condenser side. The system uses technologies proven to be very effective – the heat recovery chiller and the geothermal heating and cooling.

The new system is cooling for less than half the cost of conventional equipment, with heating about one quarter of the cost of the cold system. Utility bills for 2007-08 with air conditioning were 16 percent less than utility bills for 2005-06 without air conditioning. When corrected for the cost of energy from 2005 to 2008, the savings are 33 percent.

Normand-Maurice Building

Jacques De Grace, Pageau Morel and Associates, Montreal, Quebec Canada, receives first place in the new institutional buildings category for the Normand-Maurice Building, Montreal.

In 2002, Public Works and Government Services Canada ordered construction of a federal multi-occupant building offering offices, classrooms, warehouses, and an indoor firing range for the Royal Canadian Mounted Police, the Canadian Navy and two federal departments. The intent was to create a green building prototype that would be at least 40 percent more efficient than building meeting the country's minimum energy code. To achieve these goals, the building features several innovative measures, including underfloor displacement ventilation for improved ventilation effectiveness, a cascade ventilation principle supplying outside air to occupied spaces before transferring to secondary spaces, radiant slabs for improved thermal comfort and energy efficiency, a geothermal heat exchanger to reduce energy consumption, and an innovative solid thermal energy storage system to reduce first costs of the geothermal heat exchanger.

The results show 40 percent more outside air supplied to occupied spaces as compared to ASHRAE Standard 62.1-2004; 51 percent regulated energy cost reduction compared to the 1997 national building code; 600 metric tons in avoided CO2 emissions each year, and 31 percent reduction in potable water use.

Eric Kirkland, P.E., Smithgroup, Phoenix, Ariz., receives second place in the new institutional buildings category for the National Renewable Energy Laboratory Science and Technology Facility, Golden, Colorado.

ASHRAE, founded in 1894, is an international organization of 55,000 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.