

Capitalaire

The National Capital Chapter of the American Society of

Monthly Newsletter



Developing Leaders thru Mentoring

2011 – 2012 National Capital Chapter of ASHRAE

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Capitalaire is the publication of the National Capital Chapter of ASHRAE. Capitalaire welcomes input from its readers. Please send all communications to:

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The National Capital Chapter of ASHRAE

is pleased to announce

**The October Chapter Meeting
of the 2011 -2012 Society Year**

October 19th, 2011

**Hilton Arlington
950 North Stafford Street
Arlington, VA 22203**

For more information and registration, visit www.nccashrae.org

PES

Designing Building Automated Controls

Speaker: Mark Thompson, - Johnson Controls

Dinner

Ice Thermal Storage Applications

Speaker: John Lau, - Baltimore Aircoil Company



MEETING SPONSOR



Schedule		Costs		
Time	Event		PES	Dinner
3:15 PM – 6:00 PM	PES	ASHRAE Student Members	\$10	\$15
5:45 PM – 6:30 PM	Social	Paid NCC Dues Members with Reservation	\$30	\$25
6:30 PM – 7:15 PM	Dinner	Paid NCC Dues Members without Reservation	\$30	\$30
7:15 PM – 7:45 PM	Presentation	ASHRAE Members with/without Reservations	\$30	\$40
7:45 PM – 8:15 PM	Wrap-up	Guests	\$30	\$40
8:15 PM	Adjourn			

To make reservations visit www.nccashrae.org.

President's Corner

Congratulations to the University of Maryland on winning the 2011 Solar Decathlon. The University's entry, WaterShed, was inspired by the ecosystems of the Chesapeake Bay and the design was driven by four guiding principles:

1. Water is a precious resource and should be handled conscientiously;
2. A home should function as a micro-ecosystem;
3. A sustainable house should both conserve and produce resources;
4. Merging the best of passive and active energy strategies is the most effective way to create a house in tune with its environment.

The Solar Decathlon is a bi-annual competition sponsored by the Department of Energy that challenges collegiate teams to design, build, and operate solar-powered houses that are cost-effective, energy-efficient, and attractive. The winner of the competition is the team that best blends affordability, consumer appeal, and design excellence with optimal energy production and maximum efficiency.

The principles of the Solar Decathlon is paramount to the design and construction of buildings since buildings constitute 40 percent of the nation's primary energy use; therefore it is crucial to the HVAC&R industry, to explore implementing energy efficiency in the design of buildings. This is a core principal of ASHRAE's mission.

In keeping with the principles of the Solar Decathlon and ASHRAE's mission, our September meeting focused on Net Zero Energy Design and Emissions Trading. We had a great turnout for the PES where the speaker, Andy Price of Stanley Consultants, discussed the principles of Net Zero Energy Design and asked if the engineering community is willing to take the challenge of designing buildings that promote sustainability and energy efficiency? Mr. Price stated that the standards and guidelines to implement Net Zero Energy Design have been developed, and challenged the engineering community to incorporate the principles in our building systems design.

In October, we will continue our discussions on energy efficiency. We will present Part I of a two part PES series on Building Automated Controls design. The presentation will focus on the basic control system design as well as designing system options, such as optimal start, energy monitoring, and load shedding that promote energy efficiency and energy conservation. The dinner presentation will be on Thermal Storage and will discuss applications that can easily be incorporated in sustainable design.

Our October meeting will also promote Research and will honor ASHRAE Research donors from the National Capital Chapter. The meeting will also promote the contributions to the industry that has been funded by ASHRAE Research. ASHRAE Research has funded thousands of projects addressing such topics as sound duct design, the effect of oil in refrigerants, load calculations, thermal conductivity, simplified energy analysis procedures, weather data, fire and smoke control and solar design. ASHRAE Research has also made significant contributions to the ASHRAE Handbooks as well as the development of the Advanced Energy Design Guidelines.

We would also like to thank and encourage everyone to continue to make reservations by the deadline. The process ensures that the hotel will reserve a space that is adequately sized for the number of attendees. This also ensures that we can order the requisite number of meals.

Best Regards,

Dunstan L. Macauley, III
President – National Capital Chapter
 2011 – 2012



New Members

The National Capital Chapter of ASHRAE would like to welcome the following new members to ASHRAE and the National Capital Chapter:

- ❖ Mr. Andrej Cemi
- ❖ Ms. Taraneh Moghani
- ❖ Mr. Peter Strapp
- ❖ Mr. Clyde Jones, IV
- ❖ Mr. Mohammadreza Pasgar
- ❖ Payam Delgoshaei
- ❖ Mr. David Groves
- ❖ Mr. Hyun Nam Kim
- ❖ Mr. Robert Sloan
- ❖ Mr. Robert McGhee, Jr.
- ❖ Mr. Steve Torre
- ❖ Mr. Umair Surani
- ❖ Mr. Michael Kirkpatrick
- ❖ Mr. Shazem Islam

PES Presentation

Designing Building Automated Controls – Part I

The presentation will focus on the fundamentals of Designing Systems for Efficiency, which will prepare you for the December Professional Engineering Session (PES), where wireless technologies, network integration solutions, and chiller plant optimization will be discussed. The Designing Systems for Efficiency course will cover a host of topics to include:

- Hardware and software basics
- LON Vs BACnet
- Open protocols and why they are important
- Interoperability/integration
- Comprehensive alarm management
- Schedules
- Optimal start/stop with adaptive learning
- Monitoring energy consumption
- Advanced Algorithms
- Load shedding
- Demand control ventilation.

Speaker: Mark D. Thompson

Mark D. Thompson has been a Systems Team Leader for Johnson Controls Inc. since July of 2006 and is responsible for advanced network integration, sequence verification, development of complex graphics, and programming/commissioning for JCI and non-JCI systems. Additionally, Mark manages customer training for the local DC branch.

Prior to joining Johnson Controls Inc. in 2004, Mark worked for Flowserve Corporation's Pump Division utilizing data collection and integrity methodology. During his time with Flowserve, he also tested centrifugal pumps, designed and fabricated a cooling chamber for roller bearings, programmed in VBA for Excel and company specific software for order entry and represented the company at a college fair.

A practicing Engineer for seven years, Mark graduated with a B.S. in Mechanical Engineering from Virginia Polytechnic Institute and State University in 2004.

Dinner Presentation

Ice Thermal Storage Applications

The presentation will begin with a discussion of the primary benefits of thermal storage. Ice storage systems will be considered, with an emphasis on system components and design factors. The presentation will include a brief discussion of how thermal storage systems can be utilized on LEED projects, and several case studies will be presented.

Speaker: John Lau

John Lau joined Baltimore Aircoil Company (BAC) in 1995. As Senior Technical Engineer, he assisted in the design of ice thermal storage systems throughout the world. In 1999, John was promoted to the position of International Market Manager responsible for directing and supporting BAC's international market activities. In June 2006, John was appointed General Manager, Sales and Marketing for Greater China. During his 4 year international assignment in China, John helped to establish BAC as the market leader in ice thermal storage in the Greater China region.

John and his family moved back to Baltimore in June 2010. As Manager of Thermal Storage for BAC, he is currently responsible for the Company's ice thermal storage market development and product applications.

John is a frequent speaker at professional conferences on the topic of ice thermal storage including ASHRAE 2006 Winter Meeting, Chicago; ISHRAE (Indian Society of Heating, Refrigerating and Air Conditioning Engineers), Bangalore, 2009. 7th International Energy Agency Heat Pump Conference, Beijing, China; California Energy Efficiency Conference, Irvine, CA; US - China Energy and Environmental Building Design Workshop, Pittsburgh; and China Energy 2000 Conferences in Beijing and Shanghai.

John holds a Bachelor of Science degree in Electrical Engineering from the University of Tennessee and a MBA from the John Hopkins University. Prior to joining Baltimore Aircoil Company, John worked for Westinghouse Electric Corporation as an electrical engineer and later as a program manager with responsibility for design, development, and manufacturing of electronics equipment for the space and aviation industry.



National Capital Chapter of ASHRAE

2011 – 2012 Meeting Schedule



Dates	Theme	PES Program	Dinner Program	Location
Tuesday Sept. 13	YEA / Membership (Joint Meeting with IEEE)	Net Zero Energy Building Design	Emissions Trading	Hilton Arlington
Wednesday Oct. 19	Awards / Research	Designing Building Automated Controls – Part I	Thermal Storage Systems	Hilton Arlington
Wednesday Nov. 9	Trade Show (Joint Meeting with MCA)	Trade Show		Bethesda Marriott
Wednesday Dec. 7	President's / Membership	Designing Building Automated Controls – Part II	Combined Heating & Power Systems	Hilton Arlington
Saturday Jan. 28	Holiday Party	Holiday Party		TBD
Wednesday Feb. 8	Sustainability (Joint Meeting with USGBC)	Radiant Cooling and Dedicated Outdoor Air Systems (DOAS)	Energy Modeling Case Study	Hilton Arlington
Wednesday Mar. 14	Students / Refrigeration	Panel Discussion – Building Energy Monitoring	BIM	Hilton Arlington
Wednesday Apr. 18	Research / YEA	Variable Refrigerant System Design	Air Side Energy Recovery Systems	Hilton Arlington
May (TBA)	Tour	Technical Tour		TBD

Join ASHRAE in Chicago!

January
21–25,
2012

Don't miss the chance to participate in ASHRAE's historically best-attended Conference!

Technical Program — join your fellow members and industry leaders to discuss and examine the latest topics in the building industry, such as high performing buildings and integrated design.

Virtual Conference — if you can't make it to Chicago, take advantage of the knowledge shared in the technical program with the Virtual Conference.

AHR Expo — The ASHRAE co-sponsored AHR Expo takes place Jan. 23–25 at McCormick Place. www.ahrexpo.com.

ASHRAE Certification — all six certification programs are being offered: Building Energy Assessment Professional; Building Energy Modeling Professional; Commissioning Process Management Professional; High-Performance Building Design Professional; Healthcare Facility Design Professional; and Operations and Performance Management Professional.

Professional Development Learning Institute — five Professional Development Seminars and 14 Short Courses are offered, including a new course on the basics of combined heating and power systems and updates to courses covering Standards 62.1 and 90.1 reflect changes in the 2010 versions of these standards.



www.ashrae.org/chicago

