



Capitalaire

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The National Capital Chapter of the American Society of Heating, Refrigerating, and Air Conditioning Engineers

President's Corner

People who will not sustain trees will soon live in a world which cannot sustain people.

— Bryce Nelson

Hello again everyone. It is already October and the leaves are beginning to change color. We're off to a productive start this ASHRAE year. We had great attendance at our first meeting on September 15th at the Arlington Hilton Hotel. Thanks again to Southland Industries for their sponsorship.

Gary Hayden from gbH Engineering joined us from Norfolk to present information on LowEx Systems during the PES session. Gary provided some fundamental lessons on hydronic floor heating and ceiling cooling systems. This was a good program to kick off the year and thank you to all who attended. We were privileged to have Harry Missuriello of American Council for an Energy Efficient Economy (ACEEE) as our guest dinner speaker. Harry gave us a very good presentation on ASHRAE's Advanced Building Energy Labeling Program. He brought useful information for each of us to consider and pointed out opportunities to put the knowledge to good use. As a follow up to energy related presentations, we have several more sustainability related topics coming up this year such as "Energy Modeling", "Commissioning", "National Energy Policy", and "Sustainability". We will also be holding several joint meetings with other professional societies such as next the October 13th meeting with IEEE and March meeting with USGBC.

Andrew Rhodes, our Program Chair, did a great job and did not waste any time getting interesting programs scheduled for us this year. Please let Andrew know we appreciate the work he is doing. If there is any particular topic on your mind that you would like to see covered in

the future, please let us know by completing the feedback form that we are distributing after the programs.

Our Membership Chair, Laura Petrillo, brought up the importance of being a member of your local chapter. You will be benefiting from the discounted reservations and receive the chapter directory. Our officers and committee chairs are really doing a great job. The Winter Party Committee has been working on organizing a fun and festive event on Saturday, January 22, 2011. Sponsorships will be available for this event. Please feel free to contact me anytime if you have an idea that could help contribute to the success of our Chapter.

I hope that you will be able to join us at our next meeting on October 13th, which promises to be interesting. We will be hosting IEEE members at this meeting. The PES Session will be presented in two parts. Arun Bagal, a Sales Engineer with Cummins, will be presenting information on generators during the first part. The second topic will be on "System Approach to the Safe Storage of Fuel for Backup Generators" and will be presented by Mr. Osborne and Mr. Sisco. Bill Osborne is the regional sales manager for Highland Tank and Manufacturing and Mark Sisco is the president of East Coast Associates. During the dinner, Alan French, Manager of Technical Relations with Liebert Power and Cooling, will be speaking on "Critical Power Fundamentals and Emerging Trends in the Data Center".

I want to thank everyone for making reservations online. This always helps in making arrangements with the hotel and ensures that everyone gets a meal! Also, please keep in mind we offer discounts if you make your reservation by Friday before the meeting.

We will have a great year and it all begins with you and your participation.

Best Regards,
Tansu Sengezener
National Capital Chapter President – 2010-2011

PES: Emergency Power Systems (Generators/Fuel Oil Systems)

Mr. Osborne and Mr. Sisco will present their topic, "A System Approach to the Safe Storage of Fuel for Backup Generators." The presentation will include fuel oil storage tanks as well as other components necessary for the proper storage of fuels.

Part I - Generators: Speaker- Arun Bagal

Arun Bagal, a Sales Engineer with Cummins, has been covering the Washington, D.C. area for Cummins since 1984. He works closely with consulting engineers, contractors, and building owners

on all aspects of generator systems. Before working for Cummins, Mr. Bagal spent more than 20 years working around the world for Kirloskar Oil Engines.

Part II - Fuel Oil Systems: Speakers - Bill Osborne and Mark Sisco

Bill Osborne, Regional Sales Manager for Highland Tank and Manufacturing, has worked for Highland Tank for 13 years. He covers Washington, D.C., Northern Virginia, Maryland, Delaware, and portions of Pennsylvania and New Jersey. Mr. Osborne resides

in Lancaster, PA.

Bio for PES Speaker Mark Sisco:

Mark Sisco is the president of East Coast Associates. Founded in 1993 by Mr. Sisco, East Coast Associates, Inc. is a manufacturer's representative firm specializing in the design, engineering and ultimate procurement of fuel storage, conveyance and supply system equipment for the commercial, industrial and retail petroleum industries. For 16 years prior to the formation of East Coast Associates, Mark held a management position with a petroleum contracting and distribution firm.

Dinner Program: Critical Power Fundamentals and Emerging Trends in the Data Center

New technologies and cutting-edge strategies are a hot topic for engineers, IT managers and executives, but your data center's critical power components and design options are just as important. Get a refresher on the fundamentals of the electrical components that impact efficiency and availability in the data center. Other key topics include the emerging trends and options for each key area of the data center's power system including transformerless UPS, distribution voltage differences, redundancy options and renewable energy integration. Attendees will learn about each component of the critical power chain: what they do, why they're there and the emerging design options. This session is ideal for anyone looking for a holistic understanding of the entire critical power system in the data center.

Speaker: Alan French, Manager, Technical Relations, Emerson Network Power

Alan French, Manager of Technical Relations, Liebert Power and Cooling Business, Emerson Network Power, has been with Emerson 16 years and has more than 20 years of experience in power and controls. Alan works with key consulting firms across the US on data center power architecture and design. He works to apply the latest in industry-proven power system design and topology to create high-availability systems for business-critical applications. Mr. French holds a bachelor's degree in electrical engineering from Cleveland State University, a master's degree in business administration from the Olin School of Business at Washington University, published numerous papers, and holds eight patents.



2010
AIA/COTE
Commissioning
Symposium

Whole Building
Commissioning:
Verification by Design



AIA National Headquarters ■ Washington, D.C. ■ October 21, 2010

Presenting Sponsor



National Environmental
Balancing Bureau

Event Information

Symposium Website

Session Descriptions

Registration Page

Supporting Sponsor

Building Commissioning
Association



Building commissioning views building quality holistically and uses scientific principles to improve building efficiency and cost-effectiveness. Presented by the American Institute of Architects, this symposium will convene architects, providers, and other professionals involved with building performance to address the theme of commissioning as a quality assurance process integrated into design, construction and occupancy. Commissioning should be so deeply integrated into the design and construction process that it links the vision of the design to the first days of occupancy and thereafter to building performance for the life of the building. The goal is to view building quality in a holistic sense and to apply scientific principles aiming at a steady improvement in building efficiency and effectiveness.

Presentation topics will include:

- Total Building Commissioning: By the Book
Walter Grondzik, PE
- OPR, BOD & Systems Manual: Cost Effective Project Tools
Ron Wilkinson, PE (AKF Group)
- It's Worth the Effort □ Commissioning for Existing Buildings
Bernard Keister, PE
- Perspectives on Exterior Enclosure Commissioning
Fiona Aldous
- Quality Assurance Testing for the Building Enclosure Cx
George Blackburn, AIA
- CxP to Enhance the Value of BIM and IPD
Charles Dorgan, PE, Ph.D, CxAP
- Making Your Sustainable Investment Pay
Helen Kessler, FAIA LEED AP and Jack Wolpert, PhD, CEM, LEED AP

Attendees are invited to attend a networking reception following the symposium.

Symposium attendees will be eligible to earn **7 AIA CES credits**.

Early Registration Rates (including lunch)*

AIA members: \$199

Government employees: \$199

Nonmembers: \$249

Associate Members and Students: \$125

*Early registration closes September 24. Register today to get the best rate!

Information

Visit the [symposium Web site](#) for more information or to register. Please send questions regarding this event to kpickard@aia.org.



11TH ANNUAL MCAMW/ASHRAE JOINT TRADE SHOW

co-sponsored by SMACNA Mid-Atlantic Chapter

Date: Wednesday, November 10, 2010
Time: 5:00 to 9:00 pm
Location: Bethesda Marriott Hotel, Bethesda Maryland
Place: Congressional Ballroom

Since this Joint Trade Show event has been so popular during the past ten years, ASHRAE will join MCAMW (Mechanical Contractors Association of Metropolitan Washington) in sponsoring an industry wide trade show again this year. Both associations will host this trade show in lieu of holding their November monthly business meetings. SMACNA Mid-Atlantic will also co-sponsor again this year.

Twenty-one vendors (see list below) have reserved booth space to date....so mark your calendars now to attend an event-filled evening that promises to be information packed. Come early! Cocktails and heavy hors d'oeuvres will be served throughout the evening. The cost of this event will be \$25.

Participating Trade Show Vendor/Suppliers

Aireco Supply, Inc.	Ferguson Enterprises, Inc.
Boland	HAVTECH
Robert Bost Associates	Honeywell
Carrier Building System and Services	Johnson Controls, Inc.
Chesapeake Systems	The Joyce Agency
Complete Boiler Systems	The Morin Company LLC
Critical Systems LLC	S.J. Rafferty Co., Inc.
Cummins-Wagner Co., Inc.	Siemens Building Technologies
Sam DeSanto Co., Inc.	SMACNA Mid-Atlantic Chapter
Emerson Network Power/ Liebert Capitol Office	Victaulic
	N.H. Yates & Co.

Reminder Reminder Reminder
To register, visit: www.nccashrae.org



National Capital Chapter of ASHRAE

2010-2011 Meeting Schedule



Date	Theme	PES Program	Dinner Program	Location
Sept. 15	YEA/ Membership	LowEx Systems	ASHRAE Building Energy Quotient	Hilton Arlington
Oct. 13	Awards/Joint Meeting with IEEE	Emergency Power Systems (Generators/ Fuel Oil Systems)	UPS	Hilton Arlington
Nov. 10	Trade Show	Engineer/Contractor Interaction	Trade Show	Bethesda Marriott
Dec. 8	Presidents/ Membership	Boilers	National Energy Policy	Hilton Arlington
Feb. 9	Students/ Refrigeration	Museum Ventilation/ Air Filtration	Liquid Dessicants	Hilton Arlington
Mar. 16	Sustainability/ Joint Meeting w/ USGBC	Energy Models	Integrated Project Delivery/ Integrated Form of Agreement	Hilton Arlington
April 13	Research	Commissioning Forum	Hospital Ventilation	Hilton Arlington
May TBA	Tour	TBA		TBA

Visit www.nccashrae.org for Monthly Updates

National Capital Chapter of ASHRAE 2010-2011 Officers

President	Tansu Sengezener	703-253-1785	tsengezener@pepcoenergy.com
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Governor #4	Laura Petrillo	lgpetrillo@gmail.com

Current Committee Chairs

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Historian	Natalya Olson	nvolson@gmail.com
Holiday Party	Amy Boyce	aboyce@usgbc.org
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ASHRAE

Technology for a Better Environment

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September 28, 2010

Dear Region III Members:

I have the pleasure of inviting you to attend the **Region III Winter Meeting Dinner**. It will be held on Monday, January 31, 2011 at Hofbrauhaus Las Vegas, 4510 Paradise Road, Las Vegas, Nevada 89169. ☎ (702) 740-7888.

You are cordially invited to join other members from Region III for an evening of delicious food, drinks and fellowship.

Hofbrauhaus Las Vegas is just a few blocks from the Las Vegas Hilton. We will meet in the hotel lobby for a short cab ride to the restaurant.

Dress is business casual

The schedule for the evening has been arranged as follows:

6:00 PM	Meet at the Hilton lobby to take a shared cab ride to the restaurant.
6:30 PM	Arrive at Hofbrauhaus for drinks (cash bar).
7:30PM	Dinner will be served from the attached menu, Soft Drinks, Coffee, Iced Tea are included

The price for this great evening is \$45.00 per person. Please complete the reservation form below and return it to me, along with your check made payable to: "**ASHRAE REGION III**", so that I will receive it **no later than Monday, January 24, 2011.**

If you cannot mail it by that date, fax or e-mail your dinner reservation to me but, please, bring your check with you to dinner. It is really important to respond quickly; I must make firm reservations before the ASHRAE meeting begins. **THANKS !!!**

We are once again inviting our Student Members to join us, if you are interested in sponsoring one or more of these students please feel free to contact me, Kevin Fallin or Dan Pettway.

Once again, I look forward to seeing you on January 31st!!!!

Exam to First be Offered at 2011 AHR Expo

Take the Leap: Earn Your BEAP from ASHRAE

ATLANTA – With the growing emphasis on energy consumption reduction and cost savings, there is a recognized need for credible information to help in the assessment and modeling of energy use in buildings.

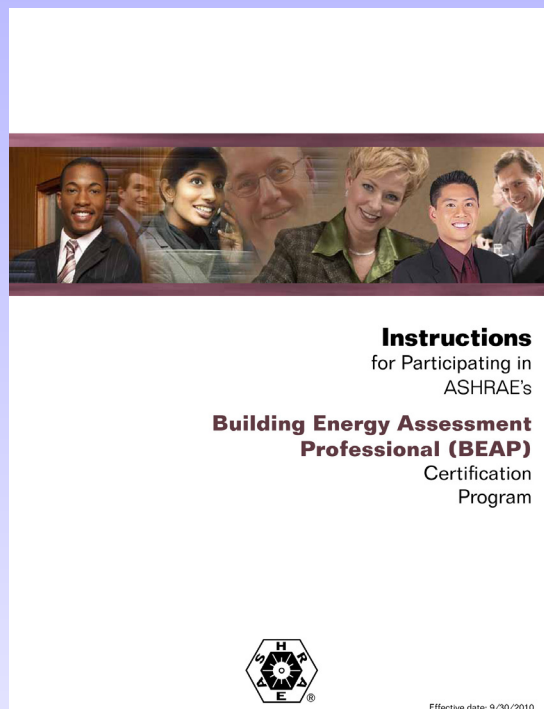
A new certification program from ASHRAE will help fill that need, recognizing individuals' ability to audit and analyze residential, commercial and industrial buildings. The Building Energy Assessment Professional (BEAP) certification complements ASHRAE's Building Energy Quotient program as well as its Building Energy Modeling Professional certification. Together, the programs provide a valuable toolkit when it comes to the evaluation and reduction of building energy use.

"We all know that 'we can't manage what we can't measure'," Tom Phoenix, chair of the committee that developed the BEAP certification, said.

"Providing reliable energy analysis means we are holding ourselves more accountable for the energy our buildings use. The results of an analysis can tell us which systems are working efficiently and which systems provide opportunities for improvement."

The BEAP certification certifies 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 was developed in collaboration with representatives from ASHRAE's Building Energy Quotient (bEQ) program, the Illuminating Engineers Society, the National Institute of Building Sciences, the Sheet Metal and Air Conditioning Contractors' National Association and the Testing, Adjusting and Balancing Bureau.

The program launches Feb. 2, 2011 with a pencil and paper examination in conjunction with ASHRAE's 2011 Winter Conference. Learn more at www.ashrae.org/beap.

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.

Encouraging Sustainable Design Worldwide: ASHRAE Standards Translated

ATLANTA – Tools to help further the fast growing green market in South America have been developed by ASHRAE and partnering organizations in that region.

Two ASHRAE standards regarding energy efficiency and sustainability recently were translated into Spanish and Portuguese.

“South America is very progressive and aggressive when it comes to green building,” Ross Montgomery, ASHRAE vice president who works closely with members in South America, said. “There are many green building engineering firms, contractors and vendors who are working to deliver green building design and green technology products to the marketplace. These translations, along with the cooperation between ASHRAE and other building industry groups in the region, provide new tools to help further green building technologies.”

ASHRAE’s Argentina Chapter recently translated ANSI/ASHRAE/USGBC/IES Standard 189.1-2009, Standard for the Design of High Performance, Green Buildings Except Low-Rise Residential Buildings, into Spanish.

The Argentina Chapter, along with other groups including the Asociación Argentina del Frío (AAF), are working to increase the market for green buildings in the country, notes Florentino Roson, past president of the Argentina

Chapter, vice president of AAF and a green building controls expert in Argentina.

“Making our society aware of the benefits of sustainable buildings is one of our most important priorities,” he said. “The translation was spurred by our desire to save energy through responsible building. Although application of the standard is not yet mandatory in Argentina, we believe Standard 189.1 will be used as a benchmark in the design, building and maintenance of sustainable buildings in the near future.”

On Sept. 2 and 3, the Argentina Chapter hosted a seminar on Standard 189.1.

In addition, ASHRAE also worked with the Green Building Council Brasil on the Portuguese translation of Standard 90.1-2007, Energy Standard for Buildings Except Low-Rise Residential Buildings. The Council wanted a translation of the standard for use in the Leadership in Energy and Environmental Design (LEED®) rating program in that country.

“We will use Standard 90.1 to guide energy efficient practices in the Brazilian civil construction industry,” Felipe Faria, operational manager, the Green Building Council Brasil, said. “The standard is used by the engineers in Brazil, but the language is still a barrier for the dissemination of this knowledge. With this transla-

tion, we believe this barrier will disappear and the professionals can project buildings suitable in our current scenario of environment concern in terms of energy efficiency, low operational costs, CO2 emission reduction, indoor air quality, etc.”

In addition, ASHRAE past president Kent Peterson visited Brasil earlier this month to support ASHRAE chapters and the Society’s work with ABRAVA, SMACNA and Green Building Council Brasil.

“The building industry groups in South America have a common goal – to encourage green building,” Montgomery said. “We strive to work together to continue the synergy of sustainability.”

Both translations are available for purchase from ASHRAE. To order, contact ASHRAE Customer Service at 1-800-527-4723 (United States and Canada) or 404-636-8400 (worldwide), fax 404-321-5478, or visit www.ashrae.org/bookstore.

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ASHRAE Design Competition Gives Students Hands-On Experience in Practical Design

ATLANTA—Engineering practices such as BIM, geothermal and combined cooling, heating and power are highlighted in the winning entries in the 2010 ASHRAE Student Design Competition.

This year's Student Design Competition featured a mock design of the Ginsburg Tower at Florida Hospital in Orlando, Fla. This structure, the tallest hospital building in the state, is a 15-story patient tower that contains the Florida Hospital Cardiovascular Institute, 440 patient beds and one of the largest emergency departments in the country. Among the 31 entries from around the world, three in particular stood out as first place winners in the three categories that the Competition offers.

First place in HVAC System Design is awarded to Nathaniel Boyd, Michael Angell, Justin Wiese, Edward Gillett and Trong Duc Nguyen, of University of Central Florida, Orlando, Fla. Their faculty advisor is Marcel Ilie, Ph.D.

After constructing a complete building information model (BIM), the students chose a constant volume air-handling unit as the primary air source and latent load control, and onsite combined cooling, heating and power (CCHP) plant based on a bank of micro-turbines fueled by natural gas.

These HVAC systems eliminate nosocomial infections via proper ventilation directional control and would provide uninterrupted HVAC service to hospital occupants, even during natural disasters, as well as reduction of environmental and economic impact of the HVAC design.

First place in HVAC System Selection is awarded to Matt Kolins, Joel Wheeler, Nicole Vogt, Jared Pалан, Todd Kuno and Zac Buckmiller, of Kansas State University, Manhattan, Kan. Their faculty advisors are Fred Hasler, P.E. and Julia Keen, P.E.

The students selected a combination of air handling units with patient room heat pumps, chillers and cooling towers and shell-and-tube heat exchangers. Additionally a geothermal loop in Lake Estelle, adjacent to the hospital, acts as a heat sink. Not only is the system environmentally conscious, but also has the best return on investment.

First place in Integrated Sustainable Building Design is awarded to Ryland Phelps, Carolyn Lamb and Amy Rose Keyzer, of Lawrence Technological University, Southfield, Mich. Their advisors are Daniel Faoro and Janice Means.

The students set out to design a sustainable and energy efficient building without sacrificing visual appeal, while responding to climate conditions and surrounding buildings and forms.

They were able to achieve this by using water reducing fixtures in all bathrooms, supplying alternative energy through photovoltaic panels and architectural fabric, using geothermal wells and evacuated tubes to reduce loads on mechanical equipment and implementing a daylighting system to reduce lighting loads and bring daylight into the building.

The first place teams are given 10-15 minutes to present their projects at the 2011 Winter Conference in Las Vegas, Nev., Jan 29-Feb. 2.

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ASHRAE Assists College Students with Tuition through Scholarships

ATLANTA—In order to reduce the financial strain on engineering students around the world, ASHRAE is awarding over \$80,000 in scholarship money for the 2010-2011 school year.

“ASHRAE acknowledges the need to be supportive of students and the development of a future generation

Continued Next Page

Scholarships Continued...

of ASHRAE members continuing to ‘advance the arts and sciences of HVAC&R,’” Victor Goldschmidt, chair of the ASHRAE Scholarship Trustees, said. “At these times of a challenging economy and need for technical advances it is more important than ever to be involved in providing scholarships to worthy students, and through our chapters, having a presence with institutions with HVAC&R related programs.”

The 19 recipients of ASHRAE’s scholarship assistance are as follows:

- **Reuben Trane Scholarship:** \$10,000 to be awarded over two years, Benjamin Oliver, McMaster University, mechanical engineering and management; Jacob Wagner, Kansas State University, mechanical engineering; and Sean Kolich, Kansas State University, architectural engineering. The scholarship was established by the Trane Co. in memory of its founder, an innovative engineer, inventor and business executive.

- **Willis H. Carrier Scholarships:** \$10,000 for one year, Daniel Cowan, University of New Haven, mechanical engineering, and Andrea Gregg, Kansas State University, architectural engineering. The scholarship was established by the Carrier Corp. in memory of its founder, who installed the world’s first scientifically designed air-conditioning system.

- **Frank M. Coda:** \$5,000 for one year, Scott Reed, East Carolina University, engineering. The scholarship was created in memory of ASHRAE’s former executive vice president, who served from 1981-2004.

The following awards include one-year \$3,000 scholarships:

- **Duane Hanson Scholarship:** Sean Holder, St. Louis University, mechanical engineering. The scholarship was established by Gayner Engineers and is named for the company’s former president.

- **Alwin B. Newton Scholarship:** Cory Hultz, Oregon Institute of Technology, mechanical engineering. The scholarship is named for an industry pioneer and ASHRAE Fellow who was granted 219 patents.

- **Henry Adams Scholarship:** Kaylee Damico, Pennsylvania State University, architectural engineering. The scholarship was established by Henry Adams Inc. in memory of its founder, a Charter Member and sixth president of ASHRAE’S predecessor society, ASHVE, in 1899.

- **ASHRAE Region IV/Benny Bootle Scholarship:** James Wood, Clemson University, bioengineering. The scholarship was established collaboratively by Region IV and Benny Bootle, a former Region IV director and regional

chair on the ASHRAE Board of Directors.

- **ASHRAE Region VIII Scholarship:** Jacob Vazquez, Instituto Tecnológico y de Estudios Superiores de Monterrey (ITESM), mechanical engineering. This scholarship was established by Region VIII, which includes Arkansas, Oklahoma and Mexico and parts of Louisiana and Texas.

- **J. Richard Mehalick Scholarship:** Matthew Kaminiski, University of Pittsburgh, mechanical engineering. The scholarship was created by a former ASHRAE member who was instrumental in the development of air-conditioning equipment used in commercial, military, aerospace and transportation application.

- **Donald E. Nichols Scholarship:** Jonathan Squires, Tennessee Technological University, mechanical engineering. The scholarship was established by a former member of ASHRAE’s Board of Directors who served for four terms.

- **ASHRAE Memorial Scholarship:** Terrance Eakin, Ohio State University, mechanical engineering.

- **Associate of Engineering Technology:** Robert Toungate, Austin Community College, heating, air conditioning and refrigeration technology; and Morgan Najewicz, Pennsylvania State University-Fayette, building engineering technology with building environmental systems technology option.

- **Bachelor of Engineering Technology:** Matthew Kuli, Pennsylvania State University-Erie, mechanical engineering technology.

- **ASHRAE General Scholarships:** Matthew Reeves, University of South Florida, pre-engineering; and Alexander Cox, Washington University, mechanical engineering.

Over the course of 20 years ASHRAE has awarded a combined \$1 million to over 200 deserving undergraduate and graduate students. It is ASHRAE’s belief that aiding these future leaders of the heating, ventilation, air-conditioning and refrigeration industry will in turn benefit society as they lead the way in sustainable HVAC&R technology.

For more information on ASHRAE scholarships, visit www.ashrae.org/scholarships. Applications are now being accepted for the 2011-12 undergraduate, regional and university-specific scholarships. The deadline is Dec. 1, 2010.

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