

April 2006

Volume 2, Issue 4

Student Activities

A quarterly newsletter for the constituents of ASHRAE Student Activities

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ASHRAE Technical Conference In Hong Kong and Community Service by ITE students

Twelve students led by Mr. Derrick Cheong, a lecturer from Building Services Technology Department at the ITE Student Branch, went to Hong Kong for a 3-day ASHRAE technical conference. During the conference, students had the



great opportunity to learn from overseas professionals on various topics in building environment, air conditioning and refrigeration technology.

One of the highlights of the technical trip was the benevolent work conducted by ITE students in Hong Kong. ITE students collaborated with students from Hong Kong Polytechnic University to arrange a community service program. They interacted and played games with the elderly in an elderly centre situated at Tsz Wan Shan, Kowloon Hong Kong. The students from Singapore introduced Singapore Exercise Workout to the elders,



and they also played games with them.

ITE students were jubilant as they had achieved significant milestones in this overseas technical trip with community service.

Submitted by Derrick Cheong, Student Branch Advisor

Congratulations to all of our graduating seniors! Best wishes for a prosperous career in the HVACR industry!

Don't forget to transfer your student membership!

Send the following information to students@ashrae.org:

1. Your name
2. Your member number
3. Your new or updated mailing address, email address, phone number and fax number
4. Your Handbook CD preference (IP or SI)

Your dues following your graduation will be:

- ⇒ \$16 USD year 1
- ⇒ \$40 USD years 2 & 3

ASHRAE Launches A New Electronic Student Membership Application!

Did you know we have a new electronic student membership application! Yes, that's right. We finally have an online student membership application!

You can find the application on the main page of the Student Zone and in the Membership & Meetings section of the Student Zone.

Click here to check it out:

[Student Membership Application](#)

Be sure to tell your Chapter President, Membership Chair and anyone else who might want to know.

Tips for completing a successful online student membership application:

- ⇒ Have your credit card handy

- ⇒ Have your sponsor name and his/her member number handy
- ⇒ Once completed, keep in mind the credit card processing may take a few days
- ⇒ Direct questions or feedback to the Manager of Student Activities at apruett@ashrae.org

Reflections on Attendance of the ASHRAE Winter Meeting

Chicago welcomed us with rain, which quickly turned to soft snowfall. We took advantage of our hotel's prime downtown location and walked two blocks to visit Millennium Park at night. A white blanket of snow reflected the colored lights glowing from within the Crown Fountain, an installation of two 50-foot glass block towers by Spanish sculptor Jaume Plensa, and purple light highlighted the sculptural stainless steel of Frank Gehry's Jay Pritzker Pavilion. I returned the following day to view the recently completed park in the daylight. Although the purpose of this trip was to attend the ASHRAE 2006 Winter Meeting, our early arrival afforded us some free time to take in Chicago's magnificence. In addition to the spectacular Pritzker Pavilion and interactive Crown Fountain, the park also houses the Cloud Gate, a seamless mirror-surfaced bean-shaped sculpture by Anish Kapoor which reflects the city around it. We strolled north along the part of Michigan Avenue referred to as the Magnificent Mile high-end and big-city shopping punctuated by famous Chicago architecture. I revealed myself as a tourist, shouting and pointing as I recognized buildings I had once memorized for my architectural history courses: the Carson Pirie Scott department store, Chicago Tribune, Sears Tower, and Marshall Fields. I paused of course to have

my picture taken at my namesake Pearson Street before riding the fastest elevators in North America

“It was the perfect opportunity to network, meeting new friends and revisiting with those I had met at previous ASHRAE functions.”

to the 94th floor observatory of the John Hancock building. It was blue sky and snow covered all the rooftops amazing.

That evening and all the next day were consumed with conference activities. We mingled with other student ASHRAE members as well as members of YEA (Young Engineers of ASHRAE). It was the perfect opportunity to network, meeting new friends and revisiting with those I had met at previous ASHRAE functions. The reason for my attendance at the conference was two-fold: to accept an award as well as to represent our local student ASHRAE chapter. It was an honor to receive, along with my teammates Laura Cavichioli and Krystal Meiners, the award for Second Place in the 2005 ASHRAE Student Design Competition (Architecture Division). Also, as the SCAD ASHRAE Treasurer, I represented our organization with a PowerPoint

presentation highlighting our student branch's activities over the past year. It proved to be a successful presentation, as I was congratulated (along with my teammates) for adding an interesting element to the conference. Attendees appreciated our presence as students of architecture.

I am thankful for the support of our School of Building Arts Dean Crystal Weaver and Chair Huy Ngo for making this trip possible and Professor Emad Afifi who provided invaluable input into our winning project and who dutifully serves as our SCAD ASHRAE Faculty Advisor. It was my first trip to Chicago, but it certainly won't be my last.



SCAD students Brenda Pearson, Laura Cavichioli and Krystal Meiners present their winning poster presentation. Their Advisor, Dr. Emad Afifi and the Region IV Regional Vice Chair for Student Activities, Chuck Curlin, join them for a photo!

By Brenda K. Pearson, Student Savannah College of Art and Design

ASHRAE Memphis Awards Scholarships

At the 3/14/06 chapter meeting, the Memphis chapter of ASHRAE handed out the 2005-2006 school year



Outstanding Junior scholarships. This year's honorees were Ms. Emily Ledbury from University of Memphis and Mr. Ryan Ross from Christian Brothers University. The

attached picture shows the recipients as well as other students and professors who attended the meeting to help celebrate with the winners.

Submitted by Russ Fletcher, Student Activities Chairman, Memphis ASHRAE

Pictured (left to right): Dr. Jeff Marchetta, Dr. Bill Janna, Evans Jack (Memphis chapter President), Keith Mayes, Phillip Taylor, Gloria Ledbury (proud mother), Emily Ledbury (University of Memphis recipient), Ryan Ross (Christian Brothers University recipient), Russ Fletcher (Student Activities Chairman), Dr. John Hochstein

Mississippi State and Mississippi ASHRAE Collaborate

Mississippi ASHRAE and MSU ASHRAE Student Chapter had a joint meeting on March 29,



2006 at Mississippi State University. The topic of the meeting was to introduce the engineering students to ASHRAE and the HVAC industry. We had four guest speakers: Chad Moore of Cooke Douglass Farr and Lemons, Parker Reece of the University Medical Center, Drew Godfrey of the Trane Company, and Nelson Douglas, Retired.



Submitted by Pedro Mago, Student Branch Advisor

Did you know the ASHRAE logo store is a great place to get inexpensive gifts for graduating student members and other Student Activities Constituents? Check it out at:

[LOGO STORE](#)



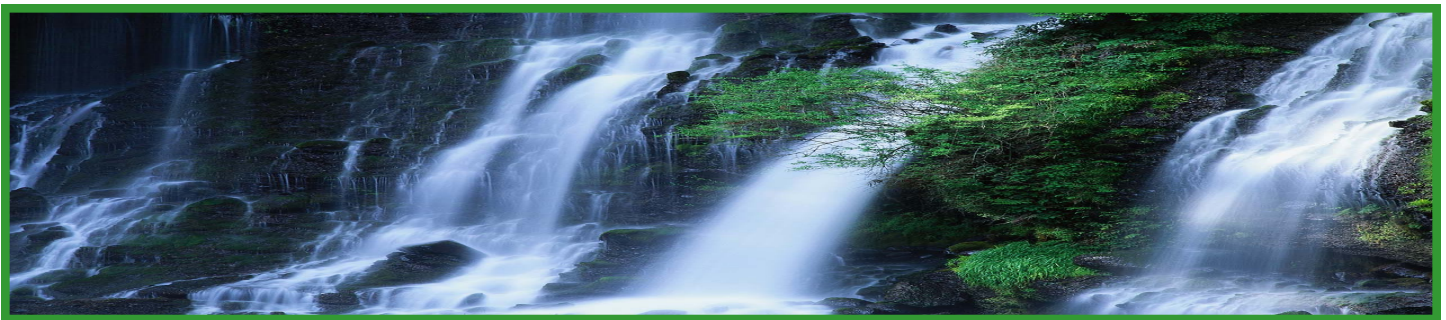
Hey Chapter Chairs...

Are you ready for summer? Don't forget to host a Student Night before the students get away! How about an ice cream social?

REMINDERS...

- ◆ **Student Branch Status Reports and Student Branch Financial Reports** are due no later than May 31, annually. The reports are available online at:
 - ⇒ [Status Report](#)
 - ⇒ [Financial Report](#)
- ◆ Either the Student Branch Advisor or a Student Branch Officer should ensure these are submitted annually on time. Student branches not submitting these reports will be considered inactive. DO NOT submit a Financial Report if your student branch does not have a bank account!
- ◆ Engineering Technology Scholarship applications are due no later than May 1, 2006. For more information or questions, contact Lois Benedict at lbenedict@ashrae.org
- ◆ The ASHRAE 2006 Annual Meeting is to be held in Quebec City, Canada, June 24-28, 2006. Although there is not an organized student program at Annual Meetings, there is a great Technical Program! For more information, go to the Meetings website at:
 - ⇒ [ASHRAE Meetings](#)
- ◆ Student Design Project Competition Reminders:
 - ⇒ May 5—deadline for submitting an entry to your local Chapter
 - ⇒ May 19—Deadline for local chapters to forward best chapter entry in each category to the Regional Vice Chair for Student Activities
 - ⇒ May 26—Deadline for Regional Vice Chairs to submit best regional entries in each category to the Manager of Student Activities
 - ⇒ June 23—Society level judging under the direction of the Student Design Project Competition Subcommittee. First, second and third place winners will be selected in each category
 - ⇒ August 4—Winners are announced no later than this date.

AISSMS'S College of Engineering in Pune, India, works on their ASHRAE Grant titled 'Experimental Setup to Understand Heat Transfer Coefficient Enhancement Due to Turbulators in Convective Heat Transfer'



Penn State Fayette Visits the NASA Glenn Research Center!

A group of Penn State Fayette students and high school members of Engineering Explorer Post 614 (a co-ed Boy Scout unit to expose students to career opportunities) visited the 500-ft deep vacuum drop tower used at NASA Glenn Research Center in Cleveland, Ohio to simulate microgravity for over 5 seconds. The trip was organized by the Penn State Fayette Student branch of ASHRAE and partially supported by the Pittsburgh Chapter of ASHRAE and a Milt Garland / Jose Reig Student Challenge Grant from Region III. The host for the tour was ASHRAE member Rick Danks (back middle with the white shirt and neck strap).



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Student Activities

Visit the Student Zone!

<http://www.ashrae.org/studentzone>

ASHRAE's New Strategic Plan

ASHRAE MISSION

To advance the arts and sciences of heating, ventilating, air conditioning and refrigerating to serve humanity and promote a sustainable world.

ASHRAE VISION

ASHRAE will be the global leader, the foremost source of technical and educational information, and the primary provider of opportunity for professional growth in the arts and sciences of heating, ventilating, air conditioning and refrigerating.

ASHRAE CORE VALUES

- ◆ **Advancement:** We are committed to the advancement of the arts and sciences of HVAC&R for the benefit of society through research, technology development and transfer, and education and training.
- ◆ **Leadership:** We are committed to providing leadership within our industry, and developing leadership qualities in our members.
- ◆ **Integrity:** We are committed to honesty in the practice of our profession as embodied in the ASHRAE Code of Ethics.
- ◆ **Service:** We are committed to service to our members and to the public.
- ◆ **Excellence:** We are committed to the achievement of technical quality and excellence in our programs, publications, courses and other activities.

2006-2007 Senior Undergraduate Project Grants

Twenty-six grants, totaling some \$120,000, have been awarded by ASHRAE to colleges and universities worldwide to promote the study and teaching of HVAC&R, encouraging undergraduate students to pursue related careers. The grants are used to design and construct projects.

- ⇒ All India Shri Shivaji Memorial Society's College of Engineering, Pune, India, build an experimental setup to understand the enhancement of condensation heat transfer using micro-fin tubes;
- ⇒ Bradley University, Peoria, Ill., design an apparatus to test fans and diffusers;
- ⇒ Cairo University, Cairo, heat exchanger performance educational test stand and heat exchanger design software;
- ⇒ Florida International University, Miami, Florida, design of a residential ventilator with enthalpy wheel heat recovery;
- ⇒ Georgia Institute of Technology, Atlanta, automated camera positioner for particle image velocimetry used in HVAC air distribution studies;
- ⇒ Hofstra University, Hempstead, N.Y., design and build a multi-purpose heat exchanger apparatus;
- ⇒ Illinois Institute of Technology, Chicago, pressurization and depressurization impact on stack effect - experimental study;
- ⇒ London South Bank University, London, low energy pumpless refrigeration absorption cycle;
- ⇒ Mapua Institute of Technology, Manila, basic refrigeration and air-conditioning system used for laboratory experiments and simple sensitivity analysis;
- ⇒ National Chin-Yi Institute of Technology, Taiping, Taichung, Taiwan, design and construction of an HFC-407C machine cooler demonstrator in refrigeration lab;
- ⇒ Purdue University, West Lafayette, Ind., heat transfer measurements in mini-channel cold plate evaporators;
- ⇒ Purdue University Calumet, Hammond, Ind., thermoelectric refrigeration using nanofluid circulation heat exchangers;
- ⇒ Rochester Institute of Technology, Rochester, N.Y., duct and fan design project;
- ⇒ Southern Illinois University, Carbondale, development of a system for testing the performance of nanofluid flow and heat transfer in a heat exchanger;
- ⇒ Tanta University, Tanta, Egypt, construction of an integrated hybrid vapor-compression desiccant dehumidification system;
- ⇒ Texas A&M University, College Station, design and construction of bench-scale ground source heat pump testing laboratory unit;
- ⇒ University of Georgia, Athens, energy audit of a university classroom/laboratory building and evaluation of energy conservation measures;
- ⇒ University of Hong Kong, multi-function testing unit for thermal comfort assessment;
- ⇒ Tri-State University, Angola, Ind., design and construction of a fan-duct system for use in the mechanical engineering laboratory;
- ⇒ University of Calgary, design of a "biofouling-free" heat exchanger;
- ⇒ University of Illinois at Urbana-Champaign, development of an HVAC system simulator for laboratory use;
- ⇒ University of Kragujevac, Serbia and Montenegro, demonstrator of floor, radiator and domestic water heating from solar heated water by using heat pump;
- ⇒ University of Portland, design and construction of a heat pump trainer for thermodynamics lab;
- ⇒ University of Windsor, HVAC metered elbows: reducing losses and noise through the use of turning vanes;
- ⇒ Western Kentucky University, Bowling Green, Ky., centrifugal pump test bed;
- ⇒ Widener University, Chester, Pa., modification and improvement of a thermodynamic system for cooling and revised cycle air conditioning.

For more information about the grant program, visit the Student Zone website under the Scholarships, Grants & Design Competition section!