



Region XIII Newsletter



The newsletter of Region XIII of
The American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc.

Region XIII

▪ <http://ashrae-region13.org> ▪ E-mail: info@ashrae-region13.org

June 2006

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DRC's Message

C. S. Ow
Director and Regional Chair XIII



Members who visited the Region XIII website and the Hong Kong Chapters webpage may have noticed the successful "Green" CRC hosted by the Hong Kong Chapter August last year. My thanks go to Dr Philip Yu, the CRC Chair and his committee members as well as the Hong Kong Chapter BOG headed by TK Chan for a superb job of hosting the event. At the farewell dinner, I am truly amazed at the number of Tai Chi exponents the Hong Kong Chapter can produce overnight, displaying their skills on stage with the Tai Chi master.



* HK Chapter and Tai Chi master.



* Society staff singing.

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Society President Lee Burgett and wife, Vice-President Gordon Holness and wife as well as society staff Bruce Hunn and wife were well entertained by the performances put up by Region XIII chapters. Of course, nothing is free as they too ended up having to perform a number before being permitted to retire for the evening. The cultural diversity within Region XIII is simply unique and these meetings do enhance awareness and respect for each other. I wonder if the next CRC hosted by Malaysia Chapter at Sunway Lagoon Resort Hotel could end up with all participants wearing their medieval costumes each reflecting their unique cultures for the dinner.

Soon after the CRC, I attended the Fall Members Council and Board of Directors meeting at Atlanta in October. Region XIII motions were carried with two of three referred to relevant Councils for action. At ASHRAE Headquarters, we undertook a brainstorming exercise to determine the future directions for ASHRAE Society. I also had the opportunity to meet up with Society staff at a tea-break gathering. Soon after the Fall meeting, I had the opportunity to visit the Philippines Chapter on November 05 in conjunction with the Asia Pacific Conference on Built Environment. Eric Panzo, the APCBE 05 Chair and Philippines Chapter Chair, Ceazar P. were on hand to see that the conference ran smoothly without a hitch. I thank them for the good effort of hosting the Regional Conference.

→ *Cont'd on Page 2*

DRC's Message → Cont'd from Page 1

At the Chicago Winter Meeting in Jan 06, Region XIII had 3 new Fellows recognized one each from Singapore, Thailand and Taiwan, the details of which should be elsewhere in this newsletter. At that meeting, Yim Hon Wa representing Region XIII did a power-point presentation which dealt with ethical business practices in the Far East, the importance of interpersonal relationship and honoring ones words etc to a crowd of around 30 participants. A number of queries were made and I would like to congratulate Yim for a job well done. Soon after that is the second Regional Planning Meeting in May in Taiwan. Chapter Operations workshop was conducted together with Research Promotion, Student Activities, CTTC and Membership Promotion each by the respective RVCs to the incoming Chapter Presidents of the region. My felicitations goes to Dr Yang BC of the Taiwan Chapter who played excellent host by having the meeting in Kaoshiung, located at the southern region of Taiwan. City tour was oversubscribed and thanks too for the nice dinner and lunches you serve us. We shall meet again in August at the Sunway Lagoon Resort near Kuala Lumpur for the forthcoming CRC 06. Whenever an event ends we feel real sorry to part but as I would put it "Don't feel sad that the event is over but be happy that it happened"

Regional Fund & Update on Chapter Constitutions

Regional Treasurer, Adrian Tan shall proceed to consolidate the Regional Fund which presently is operating under the auspicious of each chapter and reflected within each chapters budget. As the Hong Kong CRC voting showed, the present practice of each chapter meeting its regional commitments shall be continued until a new source of funding can be ascertained. To date, the Singapore Chapter is still trying its best to meet the regulatory requirement on amendments to its constitutions. Society staff has been kept informed about this development by Albert Sin.

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New ASHRAE Fellows

Congratulations to the following persons who were elected as Fellow ASHRAE at the Chicago Winter Meeting in January 2006. Fellow ASHRAE is a membership grade that recognizes distinction in the arts and science of heating, ventilation, air conditioning or refrigeration and is earned through achievement as a researchers, designer, educator or engineering executive. Approximately 600 of ASHRAE's 55,000 members are Fellows.



Piya Chongvatana

Piya Chongvatana is president, Patkol Public Co. Ltd., Bangkok, Thailand. He built the first food quality tube ice making machine in Thailand. Today, his company is one of the two largest manufacturers of tube ice makers in the world. Mr. Chongvatana's other product lines include stainless steel evaporative condensers, spiral freezers, tray tunnel freezers and continuous fluidized bed freezers, and other equipment used in breweries and seafood and milk processing plants. He designed the largest poultry processing plant in the Association of Southeast Asian Nations where some 500,000 chickens are frozen each day. In 2004, he received the Thailand Outstanding Technology Award from the Foundation for the Promotion of Science and Technology, which is the first time the award was given to someone outside the civil service.



S.K. Chou, Ph.D.

S.K. Chou is a professor and vice president, External and Industry Relations, Faculty of Engineering, National University of Singapore. He has taught air conditioning and energy analysis and modeling of buildings for more than 20 years. He pioneered the use of DOE-2 computer simulation for energy analysis in Singapore. Dr. Chou recently oversaw creation of an energy efficiency index (EEI) for non-residential buildings, developing EEI bands to use as a guide in building design and operation. Use of the bands for energy standards will be a first for Singapore. Based on a system analysis approach and designing to an energy budget, Dr. Chou wrote the BEST (Building Energy Standard) code for making energy standards compliance calculations. BEST is the first locally developed software recognized as having satisfied the requirements for use in the energy standards compliance calculations.



Chi-Chuan Wang, Ph.D.

Chi-Chuan Wang is senior researcher, manager, Energy and Resources Lab, Industrial Technology Research Institute, Hsinchu, Taiwan. He has contributed toward the understanding of the performance of fin-and-tube heat exchangers in both air-side and tube side. Through his work, more than 300 fin-and-tube heat exchangers were tested, resulting in a database and correlations that are internationally recognized. Based on this database, several Windows-based programs applicable for these exchangers were developed. Dr. Wang also helped Taiwan air-conditioning companies build advanced systems, such as R-410A air conditioners with and without inverters, multi-split air conditioners and design software for heat exchangers and heat pump systems.

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New ASHRAE Distinguished Lecturers

Two new distinguished lecturers from our Region XIII have been named by ASHRAE. The Distinguished Lecturers Program provides ASHRAE chapters with noted authorities who provide insight and speak on relevant topics that impact the HVAC&R industry. The new lecturers will serve a two-year term. There are 44 Distinguished Lecturers for 2006–2007. ASHRAE has had a total of 72 lecturers since the program started in 1996–97. Together with Mr. Vincent K. C. Tse of Hong Kong Chapter, our Region has three ASHRAE Distinguished Lecturers at present.



Chandra Sekhar, Ph.D.

Dr. Sekhar is an Associate Professor and Director of External Relations in the Department of Building at the National University of Singapore (NUS). He is also a Founding Director of Enhanced Air Quality Pte Ltd., a NUS Spin-off Company incorporated in June 2004, arising out of his research in the fields of indoor air quality (IAQ) and Energy. He has been an IAQ consultant in Singapore for 13 years. He received his PhD in Mechanical Engineering from the University of Adelaide, Australia, and continued as a postdoctoral fellow at the same university until 1991 where he worked towards the continued development of energy efficient cooling and dehumidification systems. In 1992, he joined NUS as a Faculty and has since been teaching and conducting research in the areas of ventilation and indoor air quality, air-conditioning and ventilation systems, building energy analysis and has published more than 100 papers in these areas in several international journals and conferences.

Dr. Sekhar was the recipient of the Enterprise Challenge award of the Prime Minister's Office, Singapore in 2004. He is actively involved in the development of local IAQ, ventilation and energy standards in Singapore. In September 2005, he was elected as a Member of the International Academy of Indoor Air Sciences (IAIAS). Within ASHRAE, he is currently a member of SSPC 62.1, SSPC 55, TC 2.1 and TC 4.3 as well as the CTTC Chairman of ASHRAE Singapore Chapter.

Lecture Topics:

- Ventilation, Indoor Air Quality (IAQ) and Energy Issues in Hot, Humid Climates – Past, Present and Future
- Integrated IAQ and Energy Case Studies in the Tropics
- Decoupled Ventilation Strategies for Enhanced IAQ—Demand Cooling and Demand Ventilation.



Thiam Leong CHEN, P. Eng., CEng

Thiam Leong CHEN is the CEO of Primetech Engineers, a consulting engineering firm in Malaysia. He graduated as a Mechanical Engineer (1st Class Hons) from the University of Leeds, England, and has been in the building services industry for over 25 years. He is an audit specialist in the fields of energy, fire and life safety, as well as trouble shooting and has authored numerous articles and papers on air-conditioning and refrigeration, CFC issues, fire protection, smoke management, energy issues and intelligent buildings. He works tirelessly with the Malaysian Fire Authority on issues such as Halon alternatives, performance based fire engineering design and implementation of fire certificate regulation. He was awarded the Fire Services Medal in 1999. Mr Chen is also renowned for his innovative and daring design work which culminated in his award winning design for the New Securities Commission HQ Building in Kuala Lumpur. He works with and encourages local manufacturers to carry out R&D in conjunction with his ideas to successfully manufacture new HVAC products.

He is a Past President of the Association of Consulting Engineers Malaysia; Past President of the Institution of Fire Engineers Malaysia; Advisor to the Malaysia Air Conditioning & Refrigeration Association; and a Past President of the Kiwanis Down Syndrome Foundation in Malaysia.

Lecture Topics:

- A Selection of Common HVAC Design Problems for Hot and Humid Climate Application
- Tracking the Progress of Designing for Energy Efficient
- Sustainable Office Buildings in Hot and Humid Climates
- Critical Review of the Objectives of Fire Engineering
- Fire and Life Safety Audit for the Building Industry.

ASHRAE Awards Winners

2005 Student Design Project Competition

ASHRAE sponsors this design project competition to encourage undergraduate students to become involved in the dynamic profession of Heating Ventilating and Air Conditioning, to apply their knowledge to practical design use, and to promote team work. ASHRAE will recognize the outstanding student design projects at ASHRAE's Winter Meeting.

The names of the winners of the 2004/2005 ASHRAE Student Design Project Competition from the Thailand Chapter and Taiwan Chapter are given below.

Refrigeration System Design Category:

First Place:

- Thammarat Wittayakerkkrai, Chaiwat Puttanuntadech and Kittipong Sookchai (Chulalongkorn University, Bangkok, Thailand)
- Academic Advisor: Dr. Tul Manewattana
- Industrial Advisors: Mr. Sornsack Mukjinda, Mr. Khongsak Chinnaboon and Mr. Khunpol Sang-agreeyakul

Second Place:

- Hong-Chung Su, Jian-Shud Chen (National Taipei University of Technology, Taipei, Taiwan)
- Faculty Advisor: Dr. Kuei-Peng Lee

The next 2006 Student Design Project Competition focuses on high rise residential buildings. The results of the 2006 competition will be announced in early August 2006. Further information can be found on the Student Zone of the ASHRAE website.

2006 ASHRAE Technology Awards

The ASHRAE Technology Awards recognize outstanding achievements by members who have successfully applied innovative building design in the area of occupant comfort, indoor air quality (IAQ) and energy conservation. Their designs incorporate ASHRAE standards for effective energy management and IAQ. Performance is proven through one year's actual, verifiable operating data.

Projects from Region XIII receiving Honorable Mentions:

Cary W. H. Chan

Festival Walk, Hong Kong

Category: Commercial Buildings, Existing

The goal of this project was to improve the efficiency of a 6,400 ton chiller plant by only changing the chiller control strategies in Festival Walk, a 1.2 million ft² (111,500 m²) commercial complex. The new approach changed the flow demand oriented logic to a multicriterion logic to minimize the mismatch of cooling load demand and chilled water flow demand. It has saved 435,000 kWh and reduced the release of CO₂ by 575,400 lbs (261,000 kg) annually.

Siang Hwa Lek

National Institute of Education, Nanyang Technological University, Singapore

Category: Institutional Buildings, New

The National Institute of Education (NIE) is part of the Nanyang Technological University (NTU) in Singapore. Efficient use of energy is achieved through energy-efficient lighting and air-conditioning systems and an integrated building management system and extensive use of natural ventilation and natural lighting. Features include a VAV air-conditioning system along with natural ventilation, daylighting, and an integrated building management system.

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Student Activities News

Wichai Laksanakorn Regional Vice Chair – Student Activities

This year's applications for the "Senior Undergraduate Project Grant" program have already been submitted and shall be reviewed and scored to find the winners at the Winter Meeting in Chicago. From Region XIII there are 4 applications, one each from Singapore, Hong Kong, Taiwan, and the Phillipines. Total entrants are 44, nine others are from countries outside U.S.A. ASHRAE will be awarding \$120,000.00 in 06-07 and there is maximum of \$5,000.00 award to each project. Eventually, three projects from our region have been approved. They are:

- *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
- *University of Hong Kong, Hong Kong*, multi-function testing unit for thermal comfort assessment

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Student Activities News → Cont'd from Page 4

Thailand chapter has planned a trip to attend the AHR Expo in Chicago in January 2006. Two Thai students who won the 1st prize in Refrigeration design competition last year also joined this trip. The whole group has attended the student breakfast on Sunday 22nd to witness the award receiving ceremony.

All student branches in this region have been reminded that the deadline for Student Design Competition 2006 is May 5, 2006. Our region has contained a very good record in this competition, thanks to Thailand chapter for their superb work. Every Chapters in Region XIII are encouraged to participate.

Thailand Chapter along with its student branch has organized an honorable night called "Thai Engineer...The World Engineer" on February 21, 2006. This event is to highlight the potential of Thai engineers and Thai consulting firms which are now participating in many international engineering projects especially in Asia.

Finally the PAOE, there is no secret that each Chapter has student activities going on, so SA chair , please fill in and update your PAOE point as so far some still have not filled it up yet.

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Regional Planning Meeting in Kaohsiung

13-14 May 2006, Ambassador Hotel, Kaohsiung, Taiwan



* 2006 RPM banner



* Group photo



* Visit to the former British Embassy Building

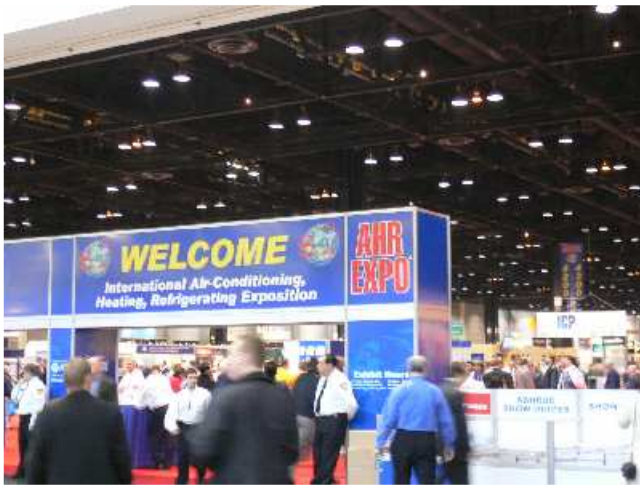


* We are waiting for the ice-cream, please!

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ASHRAE Winter Meeting and AHR Expo

21-25 Jan 2006, Chicago, IL



* AHR Expo entrance



* Region XIII dinner in Chicago's Chinatown

Regional & Society Events

Aug 2006

Aug 25 – 26 (Fri – Sat)

ASHRAE Region XIII Chapters Regional Conference, Sunway Lagoon Resort Hotel, Malaysia

Aug 27 (Sun)

Regional Planning Meeting, Sunway Lagoon Resort Hotel, Malaysia

Jan 2007

Jan 27 – 31 (Sat – Wed)

ASHRAE Winter Meeting and AHR Expo, Dallas, TX

May 2007

May/June

Regional Planning Meeting, Philippines

Jun 2007

Jun 23 – 27 (Sat – Wed)

ASHRAE Annual Meeting, Long Beach, CA

Aug 2007

Aug 17 – 18 (Fri – Sat)

ASHRAE Region XIII Chapters Regional Conference, Taipei, Taiwan

ASHRAE Region XIII Officers and Chapter Representatives

Director and Regional Chairman (DRC): Chee Sheng OW (Malaysia)
 Assistant Regional Chairman (ARC): Steven TOH (Malaysia)
 Regional Vice Chairmen (RVC):
 • Chapter Technology Transfer Alan Lam (Hong Kong)
 • Membership Promotion Robert Hu (Taiwan)
 • Resource Promotion YIM Hon Wa (Malaysia)
 • Student Activities Wichai Laksanakorn (Thailand)
 Nomination Committee Member: CHAO Uen Hua (Taiwan)
 Nomination Committee Alternate: Eric Moreno Panzo (Philippines)
 Historian: HING Fook Yong (Malaysia)
 Treasurer: Adrian Tan (Malaysia)
 Webmaster: Sam Hui (Hong Kong)

Chapter Delegate and Alternate (2005-06):

- Hong Kong T K Chan
Sam Hui
- Malaysia HEN Seak Chong
CHEA SUEI K
- Philippines Cezar P Punzalan
Rosendo C Perez
- Singapore Albert Sin Yew T
Steven C LEONG
- Taiwan YANG Bing Chwen
TU Shih-Ta
- Thailand Richakorn Chirakalwasan
Apichit Lumlertpongpana

< For latest info, please visit <http://ashrae-region13.org> >

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