

THE ASHRAE TIMES

Newsletter of ASHRAE Singapore Chapter

President's Message

By Henry Yeo



INSIDE

- | | |
|------------------------|------------|
| 1. President's Message | Page 1 |
| 2. Bill Bahnfleth DL | Page 2-3 |
| 3. Region 13, CRC 2015 | Page 4-6 |
| 4. ASC Annual Dinner | Page 7-8 |
| 5. Ross Montgomery DL | Page 9 |
| 6. Victor Tan Seminar | Page 10 |
| 7. Florence Chan Talk | Page 11 |
| 8. Larry Konopacz Talk | Page 12-13 |
| 9. MASHRAE D&D | Page 14 |

Dear ASC Members

Your unwavering support during the past years to ASHRAE Singapore Chapter (ASC) has been very significant that led us to where we are right now, and for that we are grateful. We have increased the number of membership and organised successful technical talks, seminars, networking sessions and events. This year, we would like to assure that we will add more value to our members by committing in working with various government institutions to increase awareness, efficiency and sustainable development of the HVAC/R Industry standards. We will attract younger generation to join ASC as they will be the future key to a more green and sustainable environment.

Together with the ASC BOG, let us all carry on with our commitment in raising the bar and continuous improvement of the HVAC/R standards and industry. We will need every members' cooperation in proactively promoting conscious awareness in achieving a future with better and sustainable environment for everybody. Thank you very much.

Henry Yeo

ASC President (2015-2016)

Mailing Address: ASHRAE Singapore Chapter
159, Sin Ming Road, AMTECH Building, Lobby 2, #07-02, Singapore 575625
www.ashrae.org.sg, E-mail: asc@ashrae.org.sg

Newsletter Editor: Dr. Rupesh S. Iyengar

Dr. William P. Bahnfleth DL Program

By Dr. Poh Hee Joo

ASHRAE past president William P. Bahnfleth who is a Professor and Director of Indoor Environmental Center in the Department of Architectural Engineering at the Pennsylvania State University conducted an ASHRAE Distinguished Lecture Seminar on Integrating Indoor Air Quality and Energy Efficiency in Buildings on 4th September 2015 at the Singapore Polytechnic Graduates' Guild (SPGG), Singapore.

Dr. Bahnfleth spoke on how buildings are one of the largest energy demand sectors in countries around the globe. His presentation addressed three main domains: 1. The significance of indoor air quality in terms of its impact on health and productivity and associated costs; 2. The inseparable linkage between indoor air quality and building energy demands, including examples of efficient technologies for maintaining good indoor air quality; and 3) the need for an approach to building research, design, and operation that recognizes this connection.



Continued.....

.....continued



Region 13, CRC 2015—Manila, Philippines

By Dr. Rupesh S. Iyengar



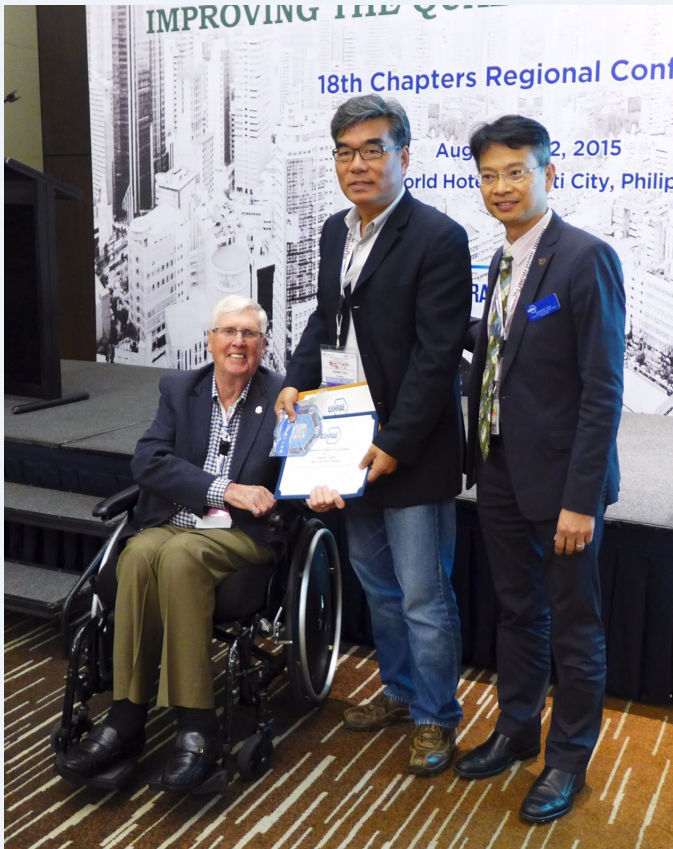
The Region 13, annual CRC 2015 was held on 21-22 Aug 2015 in the New World Hotel at Manila, Philippines. The CRC was a grand success and Singapore chapter had all its BOG attend the event. The CRC saw two new chapters in the region namely South Korea and Japan participate in the business sessions. The CRC dinner as usual was very grand and students from all chapters in the region performed a song and dance inspired by their local cultural traditions. The Singapore chapter got awards from society for 2nd highest PAOE points, RP and chapter administration at the awards luncheon. ASHRAE President David Underwood gave away the awards to the awardees.

The students also enjoyed a technical tour of some of Manila's buildings along with a full day technical seminar / conference hosted by the student activities team in Manila. Presentations were made by ASHRAE delegates to students. The RVC student activities, Dr. Sam Hui and YRC, Dr. Rupesh Iyengar made presentations to students about ASHRAE and how students can benefit by enrolling in YEA programs.



Continued.....

.....continued



Continued.....

.....continued



ASC Annual Installation Dinner 2015

By Henry Yeo

ASC's 33rd annual installation dinner was held on 18th September 2015 at Orchard Hotel in Singapore. The installation dinner was attended successfully by chapter members, architects, consultants, developers, manufacturers, suppliers etc. More than 700 guests attended the event. Mr. Quek See Tiat, Chairman of The Building & Construction Authority (BCA) graced the occasion as Guest of Honor.

The dinner was quite grand and people were seen very happy enjoying to the music and fun events that were organized at the D&D. There was also a display of products and a small exhibition was organized for the sponsors during the day time. The theme of the event was "Making Connections"



Continued.....

.....continued



A one day conference on “Energy Efficient Built Tech 2015” was also organized on the same day with the theme “Connecting Technology with the Built Environment”. The one day ASC conference invited speakers, researchers and industrial users etc. who presented on a spectrum of topics relevant to the energy efficiency in buildings. The topics comprehensively covered ASHRAE sustainability standard, ASHRAE energy auditing guidelines, the principles and showcases about energy performance and energy saving strategies in buildings, and the state-of-the-art development of energy-efficient product/system design. The opening address of the conference was done by President Mr. Henry Yeo. Mr. Kelly Williams from Big Ass Solutions talked on “Air Movement for Energy Efficient Comfort in Conditioned Spaces”. Dr. Yuichi Takemasa from Kajima Technical Research Institute, Singapore spoke on “Towards Smart ZEB Application: Endeavour to realise energy efficient buildings and good indoor environments”. Mr. Alvin Chan from Belimo Actuators Ltd. Spoke on “Delta T Management in pressure independent control valve and data collected from projects”.

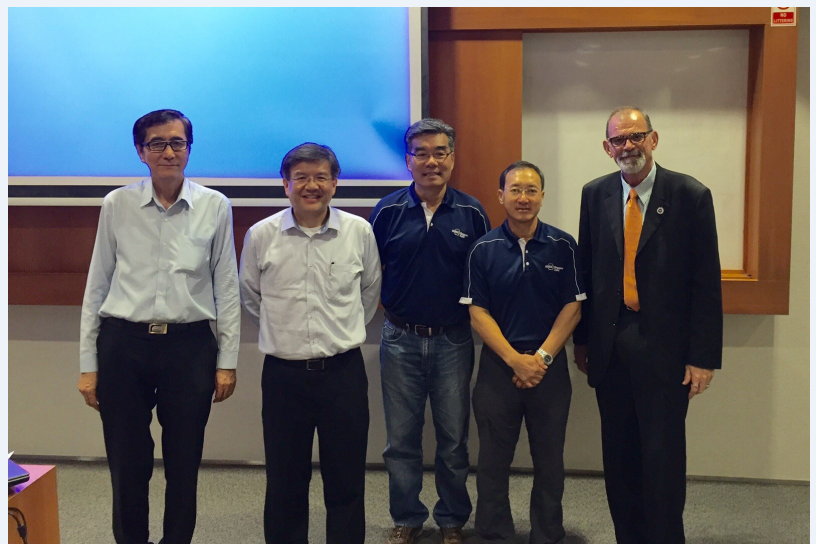
Mr. David Edenburn from Commtech Asia spoke on “ASHRAE Energy Auditing”. Dr. Jun-jing Yang from NUS spoke on “Institutional building energy performance and energy saving strategies”. Prof. Chandra Sekhar from NUS spoke on “ASHRAE Sustainability Stds.— Towards green and healthy buildings”.

Ross D. Montgomery DL Talk

By Dr. Poh Hee Joo

An ASHRAE DL talk by Ross Montgomery was organized on 20th Nov 2015 at ITE College East, Singapore. The event was jointly organized by ASC and ASHRAE ITE College East student branch. The DL discussed the following topics with the participants:

- Energy Audits, Energy Targets, Net Zero Energy Buildings and ASHRAE Building Energy Quotient (bEQ) Program.
- Commissioning of the Built Environment- Principles, Process, Procedures, and the future.
- ASHRAE Certification Exam Process and Study—Guides; How to study and take the examinations.
- Sharing of beQ analysis for an existing building in Singapore.

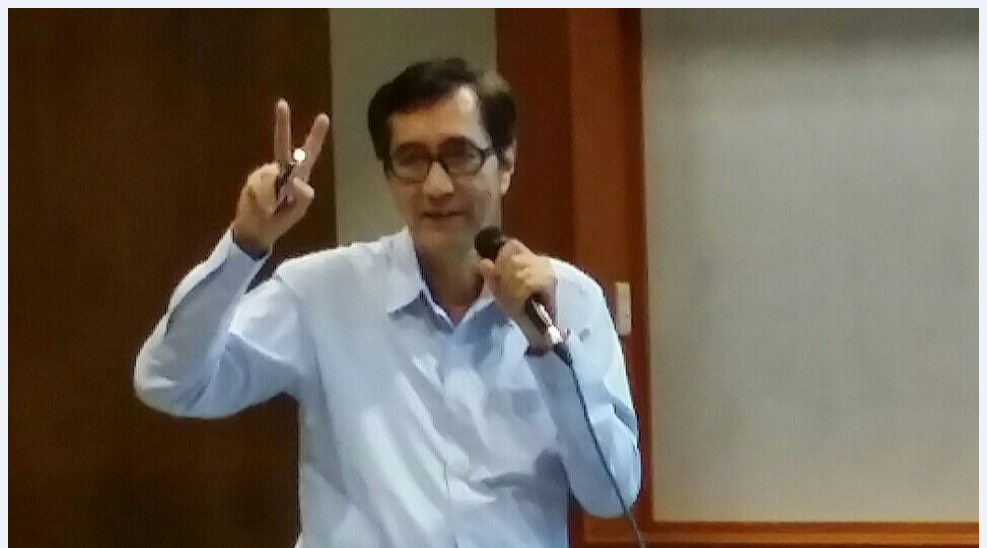


Victor Tan Seminar

By Dr. Poh Hee Joo

A seminar by Victor Tan, Principal Metrologist from A*Star was organized on 20th Nov 2015 at ITE College East, Singapore. The event was jointly organized by ASC and ASHRAE ITE College East student branch. The speaker spoke on “Verification of Measuring Devices and Measurement Techniques in Chiller Plants”.

The talk gave the knowledge and skills required to implement Measurement and Verification measures in chiller plant in conformance with Relevant international standards and Green Mark. After the seminar the participants had a better understanding of the objective, scope and implementation related to chiller plant M&V.



Florence Chan Seminar

By Dr. George Xu

A Technical Seminar on “Total Cost of Ownership (TCO) – A Science Based Approach to Selecting Air Filters” was conducted by Ms. Florence Chan, Managing Director of Camfil Singapore Pte Ltd. on August 19th 2015. Florence presented her views and experiences with regard to the Total Cost of Ownership (TCO) and the material compatibility of Filters at Singapore Polytechnic Graduates’ Guild (SPGG).

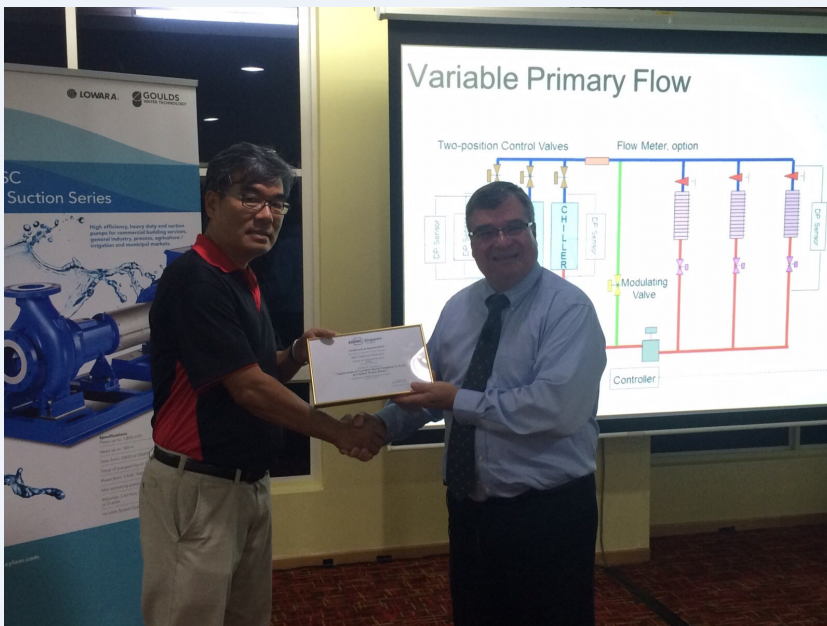
Florence first addressed that energy costs on filtering system that could amount to 30% of the total cost for air-side HVAC components, and said that the filter was the only element in a HVAC system that could be changed for a reasonable cost with little or no capital investment. She also introduced the working principles of filters that were physically simple and yet technically complicated, detailed the dependence of the operating cost of filters on lifetime, pressure drop, efficiency, logistics and cleaning, and elucidated the new technologies that had been employed to improve on filter’s quality and performance, in particular in the pursuit of the reduction in pressure drop and elimination of biological contaminants in the filter media. The topic essentially helped engineers and end users to effectively optimize filter selection for performance reliability and sustainability. This was the first seminar jointly organized by ASHRAE Singapore Chapter (ASC) and IFMA Singapore Chapter. Two PDU points were awarded to professional engineers who attended this seminar.



Larry Konopacz Talk

By Dr. Poh Hee Joo

A seminar on “Application of Variable Speed Pumping Systems in Chilled Water Plants” was conducted by Larry Konopacz on 22nd October 2015 at SPGG. The seminar discussed variable flow Chilled Water Plant design concepts and comparisons for Primary/Secondary, Primary/Secondary/Tertiary, and Variable Flow Primary Pumping Systems, highlighting the key benefits and concerns associated with each design. The speaker said that even though an adjustable frequency drive is a critical component to saving pumping energy, it does not in itself save a lot of pumping energy. If a variable speed pumping system is not properly designed and operated, it will yield only marginal energy savings.



Continued.....

.....continued



The speaker mentioned that the objective is to increase awareness of how variable speed pumping systems operate and the impact decisions on sensor type, location, total number of installed sensors, and what sensor-less control has on the energy savings potential of a system. Larry showed how to create the corresponding control curve and identify the impact the minimum control head has on potential energy savings. He also explained how the pump will actually operate within a control area and not on the control curve as theorized.



Malaysia ASHRAE D & D

By Henry Yeo

Malaysia ASHRAE's annual installation dinner event took place on the 30th October 2015. It was their 30th anniversary year. This year was special for Mashrae and so they invited regional Presidents and DRC for the event. Those attended; included the presidents from Thailand, Taiwan, Hong Kong, Singapore, Mr. Wichai, and DRC Mr. Edward.

Mashrae had incorporated a one day technical seminar on Refrigeration with exhibition during the day in celebration of this auspicious event.

