



**ASHRAE
MALAYSIA CHAPTER**

presents a

**1 Day Technical
Course On :**



- ✓ Fundamentals of Ultraviolet Germicidal Irradiation for Air and Surface Disinfection
- ✓ **Cool Thermal Energy Storage in the Era of Sustainability**
- ✓ DO's & DON'Ts in Efficient Air-Conditioning System Design
- ✓ **Variable Primary Flow Chilled Water Systems**
- ✓ A Brief Account On Avoiding IAQ Problems Using ASHRAE's New IAQ Guide
- ✓ **Performance of the GEO (Green Energy Office) building**

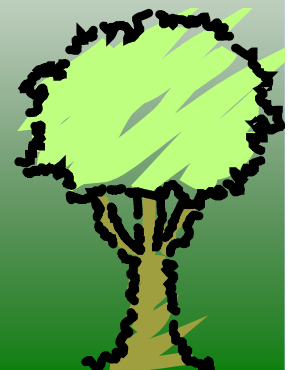
Special By Distinguished Lecturers and Other Renowned Speakers



LIMITED SEATS ONLY

11TH March 2011 (8.00 am to 5.30 pm)
Level 3, Ballroom 1, Armada Hotel,
Petaling Jaya, Selangor Darul Ehsan.

visit our website @ www.ashrae.org.my



Profile of Lecturers



Dr. William P. Bahnfleth, PhD, PE is Professor and Director of the Indoor Environment Center in the Department of Architectural Engineering at the Pennsylvania State University (Penn State) in University Park, PA, where he has been employed since 1994.

Previously, he was a Senior Consultant for ZBA, Inc. in Cincinnati, OH and a Principal Investigator at the U.S. Army Construction Engineering Research Laboratory in Champaign, IL. He holds BS, MS, and PhD degrees in Mechanical Engineering from the University of Illinois, where he also earned an undergraduate degree in music (pipe organ performance), and is a registered professional engineer.

At Penn State, Dr. Bahnfleth teaches undergraduate courses in HVAC fundamentals and controls and graduate courses in chilled water systems, hot water and steam systems, and indoor air quality. His research interests cover a wide variety of indoor environmental control topics, including chilled water pumping systems, stratified thermal energy storage, protection of building occupants from indoor bioaerosol releases, ultraviolet germicidal irradiation systems, and others. He is the author or co-author of more than 100 technical papers and 11 books and book chapters. He consults regularly on the design of chilled water thermal energy storage systems and has been involved in more than 20 projects world-wide.

Dr. Bahnfleth is member of the American Society of Mechanical Engineers (ASME), Sigma Xi, American Society for Engineering Education (ASEE), Society of Building Science Educators (SBSE), and a Fellow of the American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE). He has served ASHRAE in a variety of capacities, including Student Branch Advisor, Chapter Governor, Technical Committee and Standing Committee Chair, and as a Director-at-Large and is currently Society Vice President. He is the recipient of a 1st place ASHRAE Technology Award, Transactions Paper Award, and Distinguished Service and Exceptional Service Awards.



CHEN Thiam Leong, FASHRAE, FIFireE, FIEM, P.Eng, C.Eng, GBIAP, graduated as a Mechanical Engineer (1st Class Hons) from the University of Leeds, England, and has been in the building services industry for over 30 years.

Chen has authored and co-authored numerous publications including the Malaysian Standard on Energy Efficiency & Renewal Energy and the National Energy Efficiency Master Plan study. He is a regular lecturer and trainer on the local scene and as an ASHRAE DL, he lectures on Energy Efficiency and Sustainability globally.

In 2008, Chen led the PAM/ACEM initiative to develop the Green Building Index (GBI) rating system for Non-Residential buildings. He is currently leading the development of GBI tools for other categories of buildings.

He is a Past President of ACEM, IFEM, MASHRAE and the Kiwanis Down Syndrome Foundation; and is also the Advisor to MACRA.

In recognition of his contribution to the engineering fraternity, he was conferred the ACEM Gold Medal Award 2010.



Profile of Lecturers



Ir. Ng Yong Kong, P.Eng, GBIF, Regional Vice Chairman (RVC) for ASHRAE CTTC
He holds a Degree in Mechanical Engineering from the University of Malaya (KL) in 1985 and has more than 26 years of experience in the HVAC industry. He had lectured for JKR, ASHRAE Malaysia Chapter, the Association of Consulting Engineers, Malaysia (ACEM) and IEM for the past 16 years on Air Conditioning System Design, Indoor Air Quality and Energy Saving systems.

Ir. Ng Yong Kong was one of the Energy Consultant for the Ministry of Energy, Green Technology and Water (KeTTHA) on the National Energy Efficiency Master Plan (NEEMP) under the CPC Consortium in 2010.

He is currently the Board member for the Malaysia Green Building Confederation (MGBC), committee member of the Building Services Technical Division, IEM and is currently ASHRAE Region 13, Regional Vice Chairman for Chapters Technology Transfer Committee (RVC CTTC) and a panel judge member for ASHRAE Technology Award for the year 2010-2013.

He is also a member of the ASHRAE Indoor Air Quality Steering Committee 2010 and is currently the Malaysia Green Building Index Facilitator (GBIF), trainer and examiner on HVAC and Indoor Environmental Quality.



Ir. Leong Siew Meng is a consultant with GreenTech Solutions, currently working as a Technical Advisor with Malaysian Green Technology Corporation (MGTC), formerly known as Pusat Tenaga Malaysia (PTM) on energy efficiency and conservation, and green technology. He was instrumental in the development of the national energy efficiency and conservation guidelines for electrical and thermal equipment, and has worked on the development of the National

Energy Efficiency Master Plan under PTM. He is now working on the development of National Green Technology Roadmap for the preparation of Green Technology action plan for Malaysia.

A registered Professional Engineer with local and overseas experiences, Ir Leong is experienced in the design, engineering and construction of chemical, industrial, building services and power generation facilities as well as technical audits in buildings, and industrial and power plants. He obtained his Green Building Index (GBI) Facilitator certification in 2009 and is a panel member of GBI certifiers and examiners. Ir. Leong is a past President of ASHRAE Malaysia Chapter, past Chairman of IEM Building Services Technical Division and past Vice President of Malaysian Fire Protection Association.

Introduction

The current green movement and concern on climate change have added a new dimension to the world economy. Mindsets of world leaders and business community are adapting to a new era of sustainable development and green growth. Green building solutions focus on healthy indoor environmental quality and high sustainability systems.

WHO SHOULD ATTEND?

Consulting Engineers
GBI Facilitators
Project Managers, Facility Managers, Project Management Professionals
Building Owners, Developers & Contractors
Architects
Technicians, End Users, etc.





Synopsis

Paper 1: Fundamentals of Ultraviolet Germicidal Irradiation for Air and Surface Disinfection – by Dr William P. Bahnfleth, PhD, PE

Germicidal radiation produced by low pressure mercury vapor lamps and other sources is seeing increasing application both for air disinfection and for control of biological growth on surface. This presentation provides an overview of the fundamentals of ultraviolet germicidal irradiation (UVGI) including principles of operation, component characteristics, system types, applications, and published evidence of effectiveness.

Paper 2: A Brief Account On Avoiding IAQ Problems Using ASHRAE's New IAQ Guide - by Ir Ng Yong Kong

Based on ASHRAE's IAQ Guide, Best Practices for Design, Construction and Commissioning, the talk covers a brief overview of the key objectives that must be met to achieve good indoor air quality and causes of IAQ problems in buildings, as well as the process management strategies that owners and design teams can use during design, construction and turnover to help avoid IAQ problems. It also briefly covers the IAQ problems related to moisture and mould in building assemblies, outdoor contaminants, moisture and dirt in air handling systems, material emissions, outdoor air monitoring and control.

Paper 3: Variable Primary Flow Chilled Water Systems - by Dr William P. Bahnfleth, PhD, PE

Variable primary flow is being adopted in chilled water system design with increasing frequency as a lower cost, more efficient alternative to primary/secondary design that is not as susceptible to low delta T syndrome. Subtopics include a review of variable primary flow and primary/secondary system types; causes and effects of low delta T syndrome and potential remedies; design considerations for variable primary flow, and, comparisons of variable primary flow and primary/secondary flow taken from case study and research literature.

Paper 4: Performance of the GEO (Green Energy Office) building – by Ir Leong Siew Meng

The GEO building was the first GBI certified building in Malaysia since the introduction of the GBI building assessment system in May 2009. The GEO building was designed to be an ultra energy-efficient building in the country with a nett BEI (Building Energy Intensity) of 30 kWh/m²year. The building has many energy-efficient features and renewable energy installation in solar PV panels. The speaker will present his views on the performance of the GEO building from his experience as an occupant in the building.





Synopsis

Paper 5: Cool Thermal Energy Storage in the Era of Sustainability - by Dr William P. Bahnfleth, PhD, PE

During the 1980s and 1990s, cool thermal energy storage (TES) was a key technology in US utility demand-side management (DSM) programs. Interest in TES declined steeply as incentives disappeared during utility deregulation. Today, the focus of design has shifted from energy cost savings toward sustainability and it is reasonable to ask whether TES has anything to offer in this environment. This presentation will review the essentials of cool thermal energy storage and examine its relevance to sustainable design. Specific issues examined will include the impact of TES on site and source energy consumption, the economic case for TES without the incentives of the DSM era and the role of TES in achieving net zero energy buildings and communities.

Paper 6: DO's & DON'Ts in Efficient Air-Conditioning System Design - by Ir Chen Thiam Leong

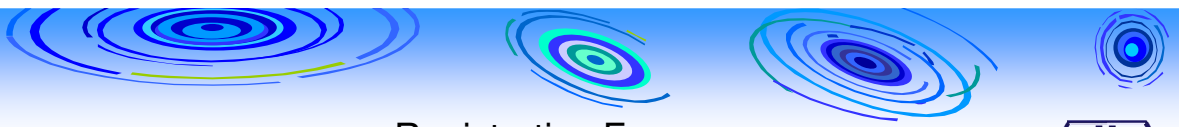
Designing efficient air-conditioning systems encompasses a holistic approach covering both the arts and sciences of HVAC as expounded by ASHRAE. That such an approach may be increasingly deficient amongst the local designers is indeed of grave concern.

This presentation will attempt to help get the local HVAC designers back on track by highlighting some of the DO's & DON'Ts in the practice.

Course Program

08:00 – 08:30	Registration + Welcome Coffee & Tea
08:30 – 09:30	Paper 1: Fundamentals of Ultraviolet Germicidal Irradiation for Air and Surface Disinfection – by Dr William P. Bahnfleth, PhD, PE
09:30 – 10:30	Paper 2: A Brief Account On Avoiding IAQ Problems Using ASHRAE's New IAQ Guide - by Ir Ng Yong Kong
10:30 – 11:00	Networking Tea Break
11:00 – 12:00	Paper 3: Variable Primary Flow Chilled Water Systems - by Dr William P. Bahnfleth, PhD, PE
12:00 – 12.15	Q & A
12:30 – 13.45	Lunch Break
13:45 – 14:30	Paper 4: Performance of the GEO (Green Energy Office) building - by Ir Leong Siew Meng
14:30 – 15.30	Paper 5: Cool Thermal Energy Storage in the Era of Sustainability - by Dr William P. Bahnfleth, PhD, PE
15:30 – 16.00	Networking Tea Break
16:00 – 17.00	Paper 6: DO's & DON'Ts in Efficient Air-Conditioning System Design - by Ir Chen Thiam Leong
17:00 – 17.30	Q & A





Registration Form

1 Day Technical Course

11th March 2011, Level 3, Ballroom 1, Armada Hotel



Registration Fee:	RM 300.00 – ASHRAE / MASHRAE Member		
	RM 350.00 – IEM, PAM, ACEM, MGBC Member		
	RM 150.00 – Student		
	RM 400.00 – Non Member		
No	Name Of Participants	Membership #	Total Fee (RM)
Total Payable			

Please reply or confirm your attendance by 5th March 2011. Registration is on a first-come first-serve basis. Only limited seats are available.

4 EASY WAYS TO REGISTER

By Phone : 03-7847 4460, Ms. Jessie Chong (0122861319) or Mr. Lam KS (012-3789098)

By Fax : 03-7847 4460 or 03-77265512

By E-mail : mashrae.my@gmail.com

By Mail : MASHRAE, 44 Jalan PJU 1A/10, Taman Perindustrian Jaya, 47200 Petaling Jaya, Selangor

We are pleased to enclose herewith our _____ cheque amount RM _____ issued in favour of "MALAYSIAN CHAPTER OF ASHRAE" and crossed "A/C Payee Only". I/We understand that the fee is not refundable if I/we withdraw after my/our registration is accepted by the Committee but substitution of participants will be allowed. If I/we fail to attend the Seminar, the fee paid would not be refunded.

Name of Company : _____

Contact Person : _____

Tel : _____ Fax : _____

Mobile : _____

email : _____

Sign & Company Stamp

Date :

