THE INSTITUTION OF ENGINEERS MALAYSIA,
Lots 60 & 62, Jalan 52/4, P.O. Box 223 (Jalan Sultan),
46720 Petaling Jaya, Selangor Darul Ehsan
Tel : 03-7968 4001/2 Fax : 03-7957 7678
Email: shahrul@iem.org.my (Ms Shahrul)

REGISTRATION FORM

FULL DAY TECHNICAL SEMINAR ON
"AIRFLOW MANAGEMENT – Applications & Techniques"
23rd February 2017

No	Name(s)	Membership No.	Grade	Fee (RM)*
SUB TOTAL				
ADD 6% GST				
Total Payable				

IMPORTANT NOTES

- **Closing Date: 20th February 2017**
- **For ONLINE REGISTRATION, payment MUST BE MADE ON REGISTRATION [via RHB Now and Maybank2u - Personal Saving & Personal Current; Any Credit Card - Visa/Master.**
- **Payment via CASH/CHEQUE/BANK-IN TRANSMISSION/BANK DRAFT/MONEY ORDER/ POSTAL ORDER/LOU/LOG/WALK –IN will be considered as NORMAL REGISTRATION**
- **FULL PAYMENT must be settled before commencement of the event, otherwise participants will not be allowed to enter the hall. If a place is reserved and the intended participant fails to attend the course, the fee is to be settled in full. If the participant failed to attend the course, the fee paid is non-refundable. IEM reserve the right to reject any LOU/LOG not in accordance with these instructions.**

The Organising Committee reserves the right to alter or change the programme due to unforeseen circumstances.

Contact Person: _____ Designation:_____

Name of Organization: _____

Address: _____

_____

Telephone No.: _____ (O) _____ (Fax)

_____ (H) _____ (HP)

Email: _____

_____ Signature & Stamp

_____ Date

Photocopies are acceptable

One Day Technical Seminar On
"Airflow Management – Applications & Techniques"

Organised and Hosted by
Building Services Technical Division,
The Institution of Engineers, Malaysia
In Collaboration with ASHRAE Malaysia Chapter

Date : **23rd February 2017 (Thursday)**
Venue : **Auditorium Tan Sri Prof. Chin Fung Kee, 3rd Floor, Wisma IEM, Petaling Jaya, Selangor**
Time : **9.30 a.m. – 5.30 p.m.**
Speaker : **Dr. Kishor Khankari, Ir. Daniel Lim Kim Chuan & Mr Mike Hurrie**

BEM Approved CPD Hours : IEM17/HQ/018/S (7.0 Hours)

Registration Fee (SUBJECT TO 6% GST)		
	ONLINE (RM)	NORMAL (RM)
IEM Student Members	100.00	150.00
IEM Graduate Members	200.00	250.00
IEM Corporate Members / MASHRAE / ACE/ MACRA/ MGBC Members	400.00	450.00
Non-IEM Members	550.00	600.00
**GST is implemented effective from 1st April 2015*		

****CLOSING DATE: 20TH FEBRUARY 2017 (Monday)***

Cancellation Policy

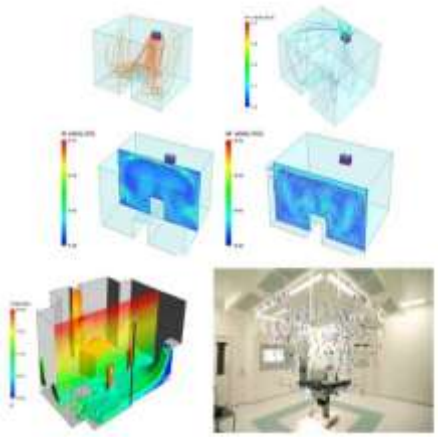
IEM reserves the right to postpone, reschedule, allocate or cancel the course. Full refund less 30% if cancellation is received in writing more than 7 days before start date of the event. No cancellation will be accepted prior to the date of the event. However, replacement or substitute may be made at any time with prior notification and substitute will be charged according to membership status.

Personal Data Protection Act

I have read and understood the IEM's Personal Data Protection Notice published on IEM's website at http://www.myiem.org.my and I agree to IEM's use and processing of my personal data as set out in the said notice.

SYNOPSIS

In any building mechanical system, the process is directly felt by occupants is the system airflow. Be it the regulation of thermal comfort or the control of contaminants, proper design and operation of airflow systems affect the safety of occupants and the building energy usage. This seminar brings in experts from USA and Malaysia to discuss on latest development in airflow management.



ABOUT THE SPEAKERS

Speaker 1 : DR. KISHOR KHANKARI

Dr. Kishor Khankari, Ph.D. provides engineering solutions and insights through Physics based simulations and analyses. Kishor has several years of experience in providing optimized HVAC solutions to a wide variety of applications involving external wind engineering, plume dispersion, displacement ventilation, natural ventilation, radiant heating and cooling, and indoor air quality and thermal comfort optimization for office spaces, patient rooms, operating rooms, cleanrooms, justice facilities, data centers, and warehouses. Dr. Khankari has developed a patented technology of a wind band design of exhaust fan assembly systems. He has developed several easy-to-use analytical software tools which are regularly used by design engineers in a variety companies including those in HVAC industry, critical facilities, and automotive industries. A noted expert in his field, he has a Ph.D. from the University of Minnesota and has been regularly published in several technical journals and trade magazines. Dr. Khankari is an eloquent speaker and has made several presentations worldwide on topics related to design and optimization of HVAC systems at various technical conferences and professional meetings.

Dr. Kishor Khankari is Fellow member of ASHRAE. He is a past President of Detroit ASHRAE Chapter. He is a past Chair of ASHRAE Technical Committee TC9.11 Clean Spaces and a Vice Chair of Research Administration Committee (RAC) at national level. He is a recipient of ASHRAE Distinguished Service Award.

PAPER 1 : STRATIFIED AIR VENTILATION SYSTEMS

Displacement ventilation systems which are also referred as "stratified air distribution systems" work on the principle of thermal buoyancy – hot air due to lower density rises above the cold air. Stratified distribution systems are becoming popular due to their ability to provide better indoor air quality with low energy demand. Stratified air distribution systems come mainly in two flavors – traditional displacement ventilation (TDV) systems and the under floor air distribution (UFAD) systems. This presentation will cover the basics of stratified air distribution systems and discuss various design and operational parameters that affect their performance.

PAPER 2 : AIRFLOW MANAGEMENT – DATA CENTERS

Airflow management within data centers is crucial for proper cooling and energy efficiency of data centers. Proper selection as well as proper placement of various data center equipment such as CRACs, perforated tiles, and racks play an important role in airflow distribution and cooling performance of data centers. This presentation will focus on basics of data center cooling and principles of air movement in data centers and show how it can be used in assessing and improving the cooling performance of their data centers.

PAPER 3 : AIRFLOW MANAGEMENT – BEST PRACTICES FOR HEALTHCARE

Air is the primary carrier of heat, moisture, and contaminants in health care facilities such as patient rooms, isolation rooms, and operating rooms. The flow path of supply air plays an important role in determining the air velocities, air temperatures, concentration of contaminants, and path of airborne pathogens in these spaces. These factors in turn determine thermal comfort of occupants, indoor air quality, and potential for transmission of airborne pathogens. This presentation will focus on the importance of HVAC configuration on airflow distribution and flow path of airborne contaminants in patient rooms and operating rooms. In addition, this presentation will cover the applications of active chilled beams, radiant heating and cooling, and displacement ventilation in patient rooms.

Speaker 2 : Ir. DANIEL LIM KIM CHUAN

Ir. Daniel Lim Kim Chuan has a total of 27 years working experience in prominent positions in Consultant Firms, Overseas Contracting Operations and Public Listed Contracting Companies. His exposure revolves around companies involved in Mechanical, Electrical and Intelligence Systems for various types of Buildings. His experiences include design, implementation and contracting for Mechanical and Electrical building Services of various types of buildings from specialised buildings to high rise buildings, both locally and overseas.

Ir. Daniel Lim Kim Chuan has a B.Eng (Hons) in Mechanical from The University of Manchester Institute of Science and Technology (UMIST), UK, and a Diploma in Building Services from Ngee Ann Polytechnic, Singapore. He is a Member of the Institution of Engineers, Malaysia (IEM) and a Registered Professional Engineer with Practising Certificate with the Board of Engineers Malaysia (BEM). He is also a Member of the Association of Consulting Engineers Malaysia (ACEM), MASHRAE, and a Committee Member of the Fire Advisory Board, IEM.

PAPER 4 : WATER AND AIRFLOW CONTROLS – HOW INTERCHANGEABLE ARE THE CONTROL METHODOLOGY?

At times, airflow control and water flow control methodology looks relatively similar. Very often, it has been assumed that similar control methodologies are used interchangeably between airflow and water flow control.

Some of the most common instances of such interchanging between airflow vs water flow control would be:

1. to maintain space temperature as in a VAV system vs maintaining chilled water flow through a modulating valve in a CAV system;
2. to maintain air pressure in an operating theatre or a cleanroom vs maintaining water pressure in a CHW System with Bypass; AND
3. to control air flow rate in a fresh air intake vs water flow in a Decoupler Chilled Water System.

Similar as it may seem, airflow control and water flow control for each of these controls methodology have its own sets of idiosyncrasies and priorities between air and water and between each of these control methods.

The objective of this talk is to look into some details, the differences as well as the similarities and the control methodology that can be considered to achieve better controls.

Speaker 3 : MR MIKE HURRIE

Although initially qualifying in the Electrical engineering field Mike had big interest in fluid dynamics, electrics and mechanical engineering. He joined a small fan company at grass roots level and from there moved to the German fan motor manufacturers Ziehl-Abegg and EBMpapst. This gave him vast experience in variable speed drives and controls. Combining his electrical and fan knowledge allowed him to specialize in speed control applications, which has now become a norm as more and more ventilation, air conditioning and refrigeration designs are based on demand control. This has been accelerated by the European Union's regulations.

Mike is a past President for the South African Institute for Refrigeration and Air conditioning (SAIRAC) where he served on and off the council for the past 25 years. He is currently based at Systemair's HQ in Sweden where he is responsible for export.

PAPER 5 : DEVELOPMENT OF EC MOTORS & APPLICATIONS IN DEMAND VENTILATION

The ability of fans to vary airflow is important both to allow improved control of ventilation (make-up air) as well as to reduce fan energy consumption. Electrically communicated (EC) motors are the current topic of interest and the look set to replace traditional AC Motors in fan drives. This session introduces to how EC motors work and illustrate their applications in the field.

SEMINAR SCHEDULE & OUTLINE

8:30 A.M. – 9:15 A.M.	Course Registration
9:30 A.M. – 5.00 P.M.	Seminar (inclusive of two (2) Tea Breaks & Lunch)
5.00 P.M. – 5.30 P.M.	Feedback / Questionnaires End of Seminar