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JOINTLY ORGANIZED BY:
 Consulting Engineering Special Interest Group, IEM and
 Building Services Technical Division, IEM

ONE DAY WORKSHOP ON COMPARISON BETWEEN VRF AND CHILLER SYSTEM AND THE EVALUATION OF DESIGN GUIDELINES FOR STRATUM VENTILATION IN THE TROPICS

Speakers:
Ir. Zhou Zhongxing & Ir. Assoc Prof Dr. Yau Yat Yeong

**25 JUNE 2015 (THURSDAY)
 9.00AM – 5.00PM**

Venue:
**C&S and TUS Lecture Room, 2nd Floor, Wisma IEM
 Petaling Jaya, Selangor**

Name(s)	Membership No. / Grade	Fees (RM)
Sub Total:		
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PAYMENT DETAILS

Cash RM _____

Cheque no. _____ for the amount of RM _____
 (non-refundable) and made payable to "THE INSTITUTION OF ENGINEERS, MALAYSIA"
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Terms & Conditions:

- For ONLINE REGISTRATIONS, only ONLINE PAYMENT is applicable [via RHB and Maybank2u –Personal Saving & Personal Current; Credit Card - Visa/Master.
- Payment via CASH / CHEQUE / BANK-IN TRANSMISSION / BANK DRAFT / MONEY ORDER / POSTAL ORDER / LO / WALK -IN will be considered as NORMAL REGISTRATION
- **FULL PAYMENT** must be settled before commencement of the course, otherwise participants will not be allowed to enter the hall. If a place is reserved and the intended participants fail 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. Registration fee includes lecture notes, refreshment.
- The Organizing Committee reserves the right to cancel, alter, or change the program due to unforeseen circumstances. Every effort will be made to inform the registered participants of any changes. In view of the limited places available, intending participants are advised to send their registrations as early as possible so as to avoid

REGISTRATION FEES (GST NOT INCLUDED)

Grade	Online Fee	Normal Fee
Student Member	RM 50.00	RM 100.00
Graduate & Corporate Member	RM 200.00	RM 250.00
Non IEM Member	RM 300.00	RM 350.00

***Closing Date: 22nd June 2015**

6% GST WILL BE IMPLEMENTED EFFECTIVE 1ST APRIL

**BEM Approved CPD/PDP Hours: 6.5
 Ref. No.: IEM15/HQ/201/W**

SYNOPSIS

Building ventilation is highly used and rated at one of the highest energy-consuming categories. Numerous efforts have been done to reduce energy usage and thus the evolution of green buildings. However, the conventional design has generated plenty of comfort and health-related issues. Stratum ventilation has been studied from 2009 and the potential of the design for thermal comfort is regarded as good compared to existing designs like the ceiling-based or the under-floor design. INTI International University takes part as a study field for the simulation model to evaluate stratum ventilation for airflow patterns, velocity profile, temperature, relative humidity and also local mean age. A small room (W4m x L5.15m) and a medium-size room (W7.85m x L9.2m) has been modelled and simulated with FloEFD software to understand the stratum potential. Prior to that, the flow of air and velocity of air has been determined using design guidelines and standards that limit the design of stratum ventilation. The overall result of the models is acceptable as the thermal comfort when evaluated using the Fanger's Model of PMV-PPD Model. Occupant's breathing zone is evaluated, and PMV Index based on ASHRAE Thermal Comfort Tool has shown a majority of the occupants are within the cool region between -0.3 up to -1.3. The local mean age of air for a medium-size room is ranging from 250s to 300s while the small room from 60s to 120s. According to the results, the thermal comfort using stratum ventilation in a tropical country is acceptable.

Who should attend?

Facilities engineers; condition monitoring team leaders; Facilities managers, maintenance managers and others in the maintenance and production departments who wish to understand why reliability should be improved, and how to improve it. If you already have a reliability or condition monitoring program, this course will help to better understand what it is all about. If you manage such a program, this course will help you to inject new life and ideas into that program.

BIODATA OF SPEAKER

Ir. Zhou Zhongxing is a member of CAR, CCHVAC, China. Currently, he is working a Market Technical Director in Qingdao Hisense Hitachi Air-Conditioning Systems Co.,Ltd. Ir. Zhou holds a degree in HVAC and Refrigeration from Xi'an Jiao Tong University, China. He enrolled in year 1986 and graduated in year 1990.

EXPERIENCE:

VRF products design and application: Market Technical Director of Qingdao Hisense Hitachi, 2002-present.

Researched in Chiller and AHU: R&D in Dunham-Bush, 1995-2001

Studied in Top Group Dunham-Bush in Malaysia in 1995

With more than 20 years of experience in chiller and VRF research and application in Dunham-Bush and Hitachi factory, participating in drafting many VRF design and installation standards in China market and China's 13th Five Year Plan in HVAC industry. Mr.Zhou would like to have a chance to communicate with Malaysia M&E engineers about VRF products.

Associate Professor Ir. Dr. Yat Huang Yau obtained a Bachelor of Science in Mechanical Engineering-Cum Laude Honor degree in 1994 from the Wichita State University, Kansas, USA, and a Master of Science in Mechanical Engineering in 1996 from the University of Science Malaysia, Penang, Malaysia. Dr. Yau obtained his DOCTOR OF PHILOSOPHY in Mechanical Engineering in 2005 from the University of Canterbury, Christchurch, New

Zealand. He was a prestigious NZAID (New Zealand Agency of International Development) PhD scholar from 2001-2004 at the University of Canterbury, Christchurch, New Zealand. Ir. Dr. Yau is also the Carter Bronze Medal holder of **Chartered Institution of Building Services Engineers, United Kingdom (CIBSE) in the year 2013**. Ir. Dr. Yau is a well-known international M&E Engineering expert and has been practicing as a M&E engineer for the past twenty years. He has also published numerous number of technical papers in very reputable thermal science and mechanics journals such as the International Journal of Refrigeration, Indoor Air, Applied Thermal Engineering, International Journal of Thermal Science, International Journal of Energy Research, Applied Mechanics Reviews, Energy and Buildings, Journal of Mechanical Engineering Science, Building and Environment, International Communications in Heat and Mass Transfer, International Journal of Heat and Mass Transfer, Experimental Heat Transfer, Renewable and Sustainable Energy Reviews, Indoor and Built Environment and Building Services Engineering Research & Technology of CIBSE. Ir. Dr. Yau is currently the Associate Editor of the world well-known Journal of Indoor and Built Environment. In addition, Ir. Dr. Yau was the Head of Department, Department of Mechanical Engineering, University of Malaya from the years 2009-2011, and the Deputy Dean (Development) from the years 2011-2012 at the Faculty of Engineering. Ir. Dr. Yau is also the principal M&E consulting engineer at University of Malaya Consultancy Unit, Kuala Lumpur, Malaysia. Ir. Dr. Yau is currently attached to INTI International University as an Adjunct Professor in Mechanical Engineering. In addition, Dr. Yau is a registered mechanical Professional Engineer in Malaysia [PEng] and a Chartered Professional Engineer in Australia [FIEAust, CPEng]. Ir. Dr. Yau is also a registered mechanical professional engineer with APEC and EMF (International Professional Engineer), and Fellow corporate members of the Institution of Engineers, Malaysia (FIEM) and Institution of Engineers, Australia (FIEAust), a full member of the American Society of Heating, Refrigerating and Air Conditioning Engineers, Inc. (ASHRAE) and life members of the Tau Beta Pi and Golden Key scholastic honour societies.

TENTATIVE PROGRAM

08:30-09:00	Registration
09:00-10:45	Development history and prospects of VRF air-conditioning system, Advantages of VRF and its economic performance.
10:45-11:00	Tea Break
11:00-13:00	Design and application of VRF air-conditioning system
13:00-14:00	Lunch Break
14:00-15:30	The Evaluation Of Design Guidelines For Stratum Ventilation In The Tropics
15:30-15:45	Tea Break
15:45-17:00	Question and Answer Section.
17:00	End