

Details

Date : 20 January 2025 (Monday)

Time : 20:00pm – 21:10pm

(Registration@19:45)

Venue : Chiang Chen Studio Theatre PolyU,

Hung Hom, Kowloon, Hong Kong

Joint Technical Seminar on “Development of a Humanized Adaptive Baseline Information Technology (HABIT) system for MVAC Control”

[Registration](#)



SCAN ME

Honorable Speaker:



Ir Prof. Mui Kwok-wai, Horace

PhD, CEng, BEng(Hons), FHKIE, MCIBSE, MASHRAE, RPE

MUI Kwok Wai, Horace is the Associate Head and Professor of Department of Building Environment and Energy Engineering (BEEE) (former Building Services Engineering (BSE)) at The Hong Kong Polytechnic University (PolyU). He received his BEng degree in Building Services Engineering (First Class) from PolyU in 1996. He was awarded the student award of HKIE and CIBSE in 1994 & 1995 and obtained his Ph.D. degree in Building Services Engineering from The Hong Kong Polytechnic University in 2002.

Prof. Mui has been managing numerous research projects and has supervised PhD and Master students who are now serving the energy and environmental engineering communities, among them four are working in major research universities in Hong Kong and Singapore. He studies building and environmental engineering covering the areas of indoor environmental quality, indoor air quality, built environment, and energy efficient building technology. His work covers bioaerosol transportation in indoor environments, thermal comfort, building ventilation and drainage system, etc. He has an excellent track record in securing external research grants from both the Government and the Industry. Prof. Mui has published more than 140 journal and archival papers and about 150 conference papers and technical reports. Prof. Mui is a recipient of 2011 Emerald Literati Network Awards for Excellence and his papers were recognized amongst the most cited articles published in Elsevier's Building and Environment between 2005 & 2008, and the best paper of the year of Journal of Indoor Built and Environment in 2011. He obtained over 40 grants including CRF (as PC), GRF, ECF, PPR and competitive funds, and the total funding sought was over HK\$20 million (exclude PolyU studentship and large equipment fund).

Seminar Highlights:

The roadmap to neutrality recognizes energy management, occupant health and comfort, and digitalization as the driving forces for achieving carbon neutrality. To reduce electricity consumption of the Mechanical Ventilation and Air Conditioning (MVAC) system in existing facilities, both "supply-side" energy management strategies and occupant engagement to enable smart MVAC adjustments, known as "demand-side" interventions are crucial for achieving energy reduction.

In this presentation, we propose passive and active occupant engagement approaches for enhancing intelligent MVAC energy efficiency on the PolyU campus. The project utilizes state-of-the-art Indoor Environmental Quality (IEQ) devices for comprehensive IEQ screening to assess the current IEQ levels in our working environment and facilitate the formation of a space-wide IEQ database for long-term space management.

With active input from occupants regarding their subjective responses and comfort levels, a previously established HABIT (Humanized Adaptive Baseline Information Technology) system will be adopted to identify and fine-tune the environmental conditions maintained by the MVAC system. The thermal environment can be adjusted by air temperature, while indoor air quality can be managed through the provision of fresh ventilation air. The HABIT system will automatically adjust the system's temperature set-point and ventilation rate to maintain an optimal indoor environment according to user preferences, thereby achieving energy efficiency. Adopting a user-centric approach, this system evaluates the interactive effects between physical IEQ data and subjective occupant preferences for MVAC control and energy management. It serves as a platform to demonstrate the application of innovative technologies in indoor environments, integrating and applying various research outputs developed by scholars to promote energy savings and carbon emission reductions, all while safeguarding the health and comfort of occupants.

Language:

English

CPD Certificate:

1 hours CPD certificate will be sent to all participants after the event through email.

Registration & Enquiry:

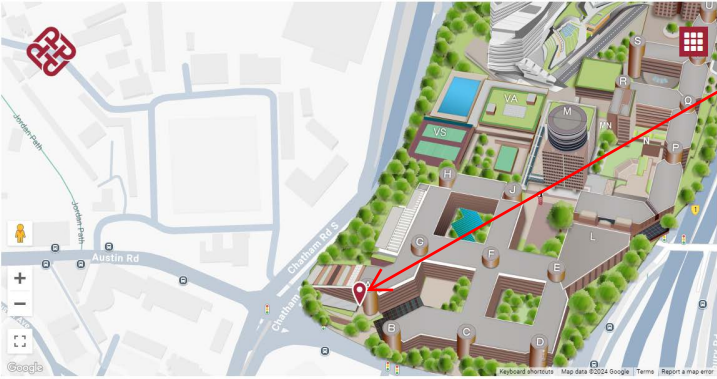
This seminar is free of charge and prior registration is required. For registration, please complete Registration Form in the following link: <https://forms.gle/CVZgrHFqXtQkSJic8>. Successful applicants will be notified by email on or before 10th January 2025. A confirmation email will be sent according to the registered emails of the participants by 13 January 2025.

For any queries, please contact , Mr. Eddie Fung at 9319 9449 or email at eddiefung@nanofil.com.hk

Venue location

Location

Chiang Chen Studio Theatre is located in Chung Sze Yuen Building right at the Fountain Square entrance of The Hong Kong Polytechnic University at Cheong Wan Road. It is adjacent to Hong Kong Cross Harbour Tunnel and MTR Hung Hom Station, with Tsimshatsui commercial area in its vicinity, and is easily accessible by various means of public transportation.



How to reach Chiang Chen Studio Theatre?

Mass Transit Railway MTR Bus Motor Vehicle

Get off at Hung Hom station at Exit A and follow the directional signage for The Hong Kong Polytechnic University.

