

ASHRAE Hong Kong Chapter
Distinguished Lecturer Program

The ASHRAE Distinguished Lecturers (DL) Program began in Society Year 1996-97. The purpose of the program is to provide ASHRAE Chapters with lecturers equipped to speak on relevant subjects of interest to ASHRAE members and guests.





Medium of instruction **English** 

#### Fee

- ➤ ASHRAE Member \$300
- Supporting organization \$350
- Standard \$400

Remark: 2-hours CPD certificate will be provided

### **THE SPEAKERS**



Prof. William P. Bahnfleth PhD, P.E., FASHRAE

Topic 1
ASHRAE Standard 241-Control of Infectious Aerosols



Ir Prof. Mui Kwok Wai, Horace
PhD, CEng, BEng(Hons), FHKIE, MCIBSE, MASHRAE, RPE

Advancing airborne pathogen assessment and control: Innovations in building ventilation strategies

# Registration

Number of participants is limited and prior registration is required. For registration, please complete Registration Form in the following link: <a href="https://forms.gle/LuBtGnk9JhBfCeTb6">https://forms.gle/LuBtGnk9JhBfCeTb6</a>

After online registration, please make a crossed cheque payable to "ASHRAE Hong Kong Chapter" and post to our mailbox at "P.O. Box 35612, King's Road Post Office, North Point, Hong Kong". At the back of cheque, please kindly state "ASHRAE Hong Kong Chapter Webinar Distinguished Lecturer Program 23/24, Name of Participant, Name of Company / Organization and Contact Number.

The deadline of application is on 3 Nov 2023. Successful members will be notified by e-mail on or before 6 Nov 2023. If the applicants have not received the confirmation e-mail on or before 6 Nov 2023, their applications will be regarded as not successful.

**Enquiry** 

For enquiry, please call Taylor Chow at 6014 2397 or email to taylor3907@gmail.com

#### **Supporting Organization**























# ASHRAE Hong Kong Chapter Distinguished Lecturer Program

## Topic 1

#### **ASHRAE Standard 241-Control of Infectious Aerosols**

ASHRAE Standard 241 is the first consensus standard to set minimum requirements for control of infectious aerosols to reduce risk of indoor transmission of airborne respiratory infectious diseases. It apples to new and existing buildings and major renovations and addresses design, installation, commissioning, operation, and maintenance. Among the groundbreaking features of Standard 241 are its specification of requirements in terms of "equivalent clean air," definition on infection control as a resilient operating mode, and inclusion of requirements for testing air cleaning systems to determine effectiveness and safety. This presentation provides a comprehensive overview of the new standard. It includes background on the origins of Standard 241, its purpose and scope, key definitions, requirements and how they can be met, implications for energy use, air cleaner effectiveness and safety testing requirements, development of a Building Readiness Plan, and requirements for operation and maintenance. Concluding remarks consider the broader implications of the standard and potential future developments.

#### THE SPEAKERS



#### **Professor William Bahnfleth**

PhD, P.E., FASHRAE

William Bahnfleth, PhD, P.E., William Bahnfleth is a professor of architectural engineering at the Pennsylvania State University (Penn State) in University Park, PA. 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 a doctor-ate in Mechanical Engineering from the University of Illinois and is a registered professional engineer. At Penn State, Dr. Bahnfleth teaches undergraduate courses in HVAC fundamentals and design and graduate courses in chilled water systems and indoor air quality His research interests cover a wide variety of topics including chilled water systems, thermal energy storage, and indoor air quality with a focus on control of bioaerosols. He is the author or co-author of more than 180 technical papers and articles and 15 books and book chapters.



Dr. Bahnfleth is a fellow of ASHRAE, the American Society of Mechanical Engineers (ASME) and the International Society for Indoor Air Quality and Climate (ISIAQ). He served ASHRAE as Society President in 2013-14 and chaired the ASHRAE Epidemic Task Force. He is the recipient of many ASHRAE awards, including the Exceptional Service Award, the E.K. Campbell Award of Merit for teaching, the Donald Bahnfleth Environmental Health Award, the Louise and Bill Holladay Distinguished Fellow Award, the Andrew T. Boggs Service Award, and the F. Paul Anderson Award, ASHRAE's highest individual honor. He is also a recipient of the Penn State Engineering Alumni Society's World-Class Engineering Faculty Award and a Distinguished Alumnus of the University of Illinois Department of Mechanical Science and Engineering.

## **Supporting Organization**























# ASHRAE Hong Kong Chapter Distinguished Lecturer Program

## **Topic 2**

# Advancing airborne pathogen assessment and control: Innovations in building ventilation strategies

In this talk, Professor Horace Mui will delve into the crucial role of building ventilation in minimizing the airborne transmission of bioaerosols. He will introduce a novel IoT-based tracer gas system that enables the assessment of ventilation performance and identification of transmission pathways in real-life scenarios. The talk will highlight practical applications of this innovative system in diverse settings, including elderly centers, theaters, and hospitals, showcasing the system's effectiveness in evaluating and optimizing indoor air quality in an economical and efficient manner. Furthermore, he will discuss the latest research findings on effective ventilation strategies for mitigating infection risks in general inpatient wards in hospital settings. These findings provide a general guideline for implementing appropriate ventilation measures to create a safer and healthier environment for both patients and healthcare professionals. The talk will provide valuable insights into the significance of ventilation in reducing the spread of airborne pathogens and offer practical solutions for optimizing ventilation systems to enhance infection control measures.

#### THE SPEAKERS



#### Ir Professor Mui Kwok Wai Horace

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

Professor Mui is an Associate Head and Professor of the Department of Building Environment and Energy Engineering at The Hong Kong Polytechnic University. He also holds the position of the Associate Head of the College of Undergraduate Researchers and Innovators (CURI) and the Master at the CURI Residential College.

With a strong background in building and environmental engineering, Prof. Mui possesses extensive research expertise in areas such as indoor environmental quality, indoor air quality, the built environment, and energy-efficient building technology. He has an outstanding track record in securing external research grants from both government and industry sources. He has published over 300 journal articles, archival papers, conference papers, and technical reports. He was ranked the world's top 2% of scientists in the field of Building & Construction by the published index compiled by Stanford University.



Recognized for his professional accomplishments, Prof. Mui is a Fellow of The Hong Kong Institution of Engineers (HKIE), a member of the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE), and a member of The Chartered Institution of Building Services Engineers (CIBSE).

Beyond his academic and professional pursuits, Prof. Mui actively engages in community service, particularly with organizations dedicated to serving the underprivileged. He has also provided expert consultancy services on high-profile construction projects and court cases related to indoor air quality.

### **Supporting Organization**

















