

Language English CPD Hours
1.5 hours

Admission Free

Quota 1,000 Persons (First-come-first-served) Delivery
Online participation via ZOOM
(Pre-registration required)

Moderator Prof. Ar. Ada Fung

Prof. Christopher CHAO

Vice President (Research and Innovation) and Chair Professor of Thermal and Environmental Engineering of The Hong Kong Polytechnic University



Prof. Christopher CHAO is Vice President (Research and Innovation) and Chair Professor of Thermal and Environmental Engineering of The Hong Kong Polytechnic University. He received his BSc(Eng) degree in Mechanical Engineering (First Class) from The University of Hong Kong in 1988 and obtained his MS and PhD degrees in Mechanical Engineering from the University of California, Berkeley in the US in 1992 and 1994 respectively. He was Dean of Engineering and Chair Professor of Mechanical Engineering at The University of Hong Kong from 2018 to 2021. Before that he was Head and Chair Professor of Mechanical and Aerospace Engineering at the Hong Kong University of Science and Technology.

Prof. CHAO studies thermal and environmental engineering covering areas of indoor air science, built environment, energy efficient building technology and energy engineering. He was ranked by Clarivate Analytics in the top 1% worldwide by citations in the research field of Engineering in 2020 and 2021, and Elsevier BV and Stanford University among the world's top 2% most-cited scientists in the field of Built Environment & Design for career-long citation impact in 2021.

## **Synopsis**

In face of reaching the tipping point of global warming accompanied by extreme events, such as more frequent heat waves and rise in sea level etc., the Hong Kong government has set out targets in multiple areas in the Hong Kong's Climate Action Plan 2050 to achieve carbon neutrality. In this talk, Prof. Chao will present the global trends in carbon neutrality. The targets and actions of governments worldwide, including GBA and Hong Kong, will be reviewed. The role of buildings and corresponding issues related to IAQ and occupant health are extremely important in achieving carbon neutrality from a holistic point of view. An overall picture of the different technologies for carbon reduction and energy saving, from readily available in the market, to be available in the near future to those in the R&D stage, will be shared. A number of on-going research work will be shared, including Al-based chiller plant optimization, passive radioactive cooler & paint, digital twin for infectious diseases response and treatment, etc. Some recent progress on bioinspired technologies will also be discussed. As one of the worldwide top-tier universities and nurturing environment for research talents of different backgrounds, The Hong Kong Polytechnic University (PolyU) has been a pioneer in leading a campus carbon neutrality roadmap to achieve the target before 2050. At the end of his talk, Prof. Chao will share PolyU's experience on carbon neutrality, including the approaches and priorities.







