

UNIVERSITY OF MACAU
FACULTY OF SCIENCE AND TECHNOLOGY
DEPARTMENT of
CIVIL AND ENVIRONMENTAL ENGINEERING

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**" The role of wind-structure interaction in air
ventilation and air pollution dispersion in urban
environment "**

by

Prof. Kenny KWOK

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Date: 27/03/2018 (TUESDAY)

Time: 2:30PM – 3:30PM

Venue: E11 – G015

Abstract

The recent economic development in Asia is driven by unprecedented growth in industrial and manufacturing activities. The growth in wealth also witnesses a rapid urbanisation and widespread construction of high-density high-rise commercial and residential buildings in major cities around the world. The air pollution generated by these activities are often poorly control and result in a decline of air quality which is exacerbated by vehicular and other undesirable emissions. This presentation examines the role of wind-structure interaction in air ventilation and air pollution dispersion in urban environment. The results of studies of the pedestrian level wind conditions and dispersion of haze fog and communicable disease around buildings are presented and discussed.

Biography

Professor Kenny Kwok is currently a Professor of Engineering at The University of Sydney. He was previously Professor of Engineering at Western Sydney University (2008 to 2017), Professor of Civil Engineering at Hong Kong University of Science and Technology (1998-2008) and Professor of Wind Engineering at The University of Sydney (1999-2002). Kenny is also Professor Emeritus in the Department of Civil and Environmental Engineering at Hong Kong University of Science and Technology since 2008. His research interests include wind engineering, structural dynamics, vibration control, human perception of motion, and environmental fluid mechanics, particularly with respect to the dynamic behaviour of tall buildings and flexible structures in strong winds. His research focuses on fundamental aspects of building aerodynamics and wind-structure-occupant-damper interactions, and their practical applications to real life situations. He has published over 500 articles in journals, book chapters, invited and keynote papers, and conference papers. He is a Life Member of the Australasian Wind Engineering Society, a Fellow of the Hong Kong Institution of Engineers and Institution of Engineers, Australia, and a Scientific Advisor of the Hong Kong Observatory.

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