

ASHRAE Hong Kong Chapter Seminar after the 29th Annual General Meeting

New Guardian against SARS

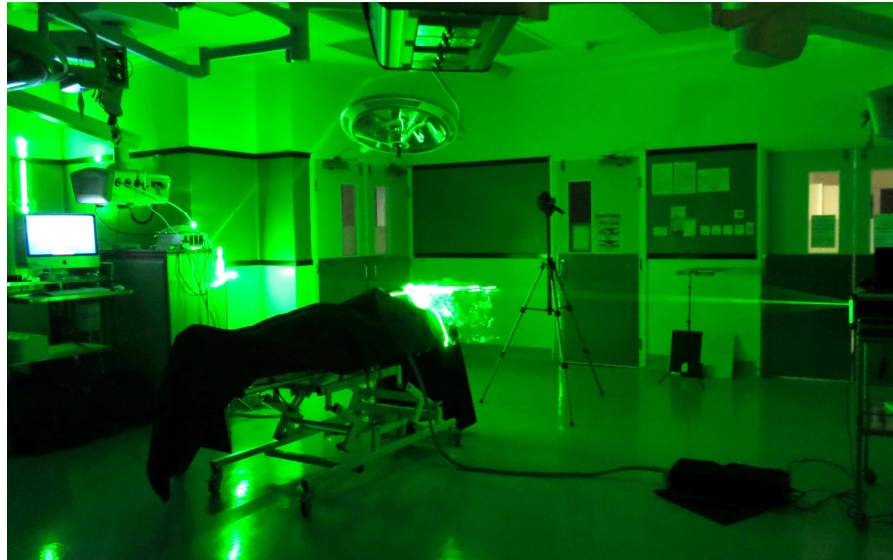
Z2-033, Hong Kong
Polytechnic University,
Hung Hom

16th May 2013
7:30 – 8:15 pm
(After 29th ASHRAE AGM)

Language: English

Guest Speaker:

Dr. Benny Chow



Dr Benny Chow is the Director of Sustainability at Aedas. He is a HKGBC GB Faculty, Expert Panel Member, a BEAM Pro, USGBC LEED AP (BD+C), ChinaGBC GBL Manager, and an award winning sustainable design expert with worldwide project experience. He has extensive experience in sustainable design, specializing in building performance simulation, computational fluid dynamics and green BIM integration. Dr. Chow is concurrently appointed as Honorary Associate Professor for the Department of Mechanical Engineering at HKU, an Adjunct Associate Professor for the Center for Housing Innovations at CUHK, and an Honorary Postdoctoral Fellow of the Center for Emerging Infectious Diseases (CEID), Faculty of Medicine at CUHK.

The design of airborne infection isolation (AII) room has become one of the major research domains following the emergence of the global concern of acute respiratory diseases in this century. These include severe acute respiratory syndrome (SARS) in 2003, H5N1 avian influenza, and pandemic influenza H1N1 in 2009. All of which have claimed thousands of lives.

The research study implemented a high-fidelity human patient simulator (HPS) which could be programmed with different lung breathing conditions and oxygen flow rate settings. The study quantitatively revealed the distinctive patient exhaled airflow patterns and the extent of bio-aerosol, generated directly from the patient source with the application of different oxygen delivery interventions for different patient lung conditions and oxygen flow rates.

Source control is therefore the most efficient and effective approach to the reduction and even elimination of patient exhaled bio-aerosol contaminants which makes no venue for the wide spread of acute respiratory diseases, such as SARS.