

Departmental Research Seminar Series 2014-2015

Title: 3-Dimensional Visualization and Dynamic Modelling of Air Pollution Dispersion in Urban Hong Kong

Speaker: Miss Wei CHENG, PhD Candidate, Department of Geography

Date & Time: Thursday, 11 December, 2014, 12:30 pm

Venue: Room 10.25, 10/F, Department of Geography, The Jockey Club Tower, Centennial Campus

Abstract:

With fast-changing urban landscapes, buildings are vertically expanding and severely densified. Street canyons, a semi-enclosed environment where buildings line up continuously along a street, form a key element of cities. Air pollutants in street canyons reveal higher concentration levels in comparison to background values due to poor natural ventilation and proximity to traffic emission. Hong Kong is a densely populated megacity with a typical 3D urban landscape. Heavy traffic and deep street canyons pose great threats to its urban air quality. This study aims to investigate the patterns of vertical air pollution dispersion in street canyons of Hong Kong. The distribution of outdoor air pollutants will be modelled based on field measurements. A methodological framework for 3D visualization and dynamic modelling of air pollution dispersion within a city-wide scope would be established.