Numerical Simulation of the Solar Shading Effects of Trees

Date: 4 November, 2014
Time: 3.00 to 5.00 pm
Venue: SDE 3 Level 4 LR427, School of Design and Environment, NUS
(Refreshment will be provided)
Convenor: Prof Wong Nyuk Hien

ABOUT THE SPEAKER
Professor Eiko Kumakura is currently an Assistant Professor in Faculty of Urban Environmental Sciences, Division of Architecture and Urban studies, Tokyo Metropolitan University, Japan. She obtained her PhD from Tokyo Institute of Technology in 2013. Her work employs numerical simulation to study the solar shading effects of trees in the thermal and ultraviolet environment of an urban area. She is currently focusing on integrating thermal simulation and visualized information as a communication device for planners, designers, and the general public.

ABSTRACT OF CONTENTS
Greenery plays an important role in reducing the Urban Heat Island effect. One key impact includes the reduction of the radiant heat due to the excellent shading property of greenery. The presentation will focus on the development of a 3D CAD model applicable as a Thermal Environmental Design Support Tool in urban green space planning. Specifically, the presentation will highlight the development of numerical tree models that could simulate the effects of trees’ solar shading on the thermal and ultraviolet environment. Such simulation tool can serve as a communication device for analyzing the actual circumstances in planning and maintaining green space. Including numerical simulation tools, visualization tools open possibilities to stimulate communication between experts and the general public. The presentation will also cover a project that describes the 3D reconstruction of tsunami-struck villages in Japan and the visualization tools (CityEngine and ArcGIS Online) are used as communication devices for the digital archiving of the villages’ pre-tsunami living environment.

REGISTRATION DETAILS
Admission is Free and all are welcome. Please register here by 21 October 2013, Tuesday.
For enquiries, please contact Ms Amanda at 65164836.

Disclaimer: The organizer reserves the right to cancel or postpone the event due to unforeseen circumstances.
BUSES
Along Clementi Road: Bus nos. 33, 96*, 188
Along Kent Ridge Crescent: Bus nos. 95, 96*, 151
(*Bus no. 96 may be boarded at Clementi Interchange, next to Clementi MRT station)
Campus map: http://www.nus.edu.sg/campusmap/