



Department of Civil Engineering  
The University of Hong Kong



Centre for Infrastructure and  
Construction Industry Development

## SEMINAR

jointly organised by  
Department of Civil Engineering and CICID, HKU

### **Global benchmarking of low energy-carbon urban districts**

by  
Dr Perry Yang  
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School of City and Regional Planning and School of Architecture,  
Co-Director, Georgia Tech – Tongji Sino- U.S. Eco Urban Lab, Shanghai and Atlanta  
Georgia Institute of Technology, US

Date: June 18, 2014 (Wednesday)  
Time: 2:00 - 3:00 pm  
Venue: Room 6-12B, Haking Wong Building  
The University of Hong Kong

#### **ABSTRACT**

The talk introduces a method of energy performance based urban design, a forward-looking modeling approach to address the issue of how the scientific-based analysis articulates design. Seven global cities and their 11 central urban districts are chosen for mapping the urban form structure, energy performance, carbon footprint and solar availability of the built environment. The relationship between urban form and its energy and carbon efficiency is explored through benchmarking their performance. A sample urban block modeling is conducted and an interventional design approach is taken for showing how new urban form and internal organization of cities affect energy and carbon intensity. Urban design is seen as a tool to synthesize complex factors for projecting a forward-looking future urban system.

#### **ABOUT THE SPEAKER**

Perry Pei-Ju Yang received degrees from National Taiwan University (Ph.D., M.Sc., B.Sc.) and Massachusetts Institute of Technology (MS). He co-directs the *Georgia Tech – Tongji Sino – U.S. Laboratory for Ecological Urban Design* in Shanghai and Atlanta. Before joining Georgia Tech, he received the Fulbright Scholarship to be SPURS Fellow at MIT from 1999 to 2001. He taught at the National University of Singapore as an Assistant Professor of Architecture and Urban Design from 2001 to 2008. Perry's research and practice focus on *Performance-based Urban Design*. He has been awarded prizes in international urban design competitions including the *2009 World Games Park* at Kaohsiung City of Taiwan in 2005, a project opened in July 2009 and featured by CNN as "an eco-friendly venue". His urban design work was published in January 2010 issue *Ecological Urbanism at WA (World Architecture)*. He is the board member of *International Urban Planning and Environment Association (UPE)* and served as the co-chair of the *UPE9* in August 2010, Guangzhou China. Recently, he co-organized the special session "*Energy resilient urban planning*" in *2014 International Conference on Applied Energy (ICAP)* in Taipei, June 2014.

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