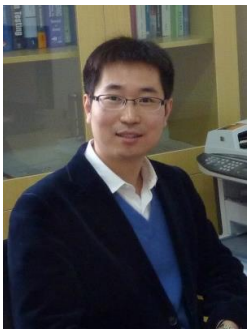
THE HONG KONG POLYTECHNIC UNIVERSITY
香港理工大學

DEPARTMENT OF CIVIL AND ENVIRONMENTAL ENGINEERING
土木及環境工程學系
CEE



Creating Innovative Structural Systems for Enhanced Seismic Resilience of High-Rise Buildings

Dr Xiaodong JI
Associate Professor, Department of Civil Engineering,
Tsinghua University, Beijing, China
jixd@mail.tsinghua.edu.cn

ABSTRACT

Recent major earthquakes have clearly demonstrated that our modern urban society needs to be more resilient toward earthquake disaster. Modern cities are usually characterized with high-density high-rise buildings, while high seismicity often leads to serious challenge to design and construction of the high-rise buildings. For enhancing seismic performance and resiliency of high-rise buildings, a natural solution is to develop innovative high-performance structural components and systems, which can quickly recover after strong earthquake shaking. This seminar will provide an overview of recent development of high-performance components and novel structural systems, which have seen increasing use in high-rise building constructions in China. These systems include steel tube-reinforced concrete (ST-RC) column system, composite mega-structural system, hybrid coupled walls system with replaceable steel coupling beams (RSCB), and TVMD wall system. The concept, key issues, and design method of these novel systems are summarized. Finally, this Seminar highlights a few cutting-edge problems for further enhancement of seismic performance and resiliency of high-rise buildings.

Date: **28 June 2018 (Thursday)**

Time: **3:30 p.m. – 4:30 p.m.**

Venue: **Room ZS1201s, 12/F, Block Z,**
The Hong Kong Polytechnic University,
181 Chatham Road South, Hunghom, Kowloon,
Hong Kong

SPEAKER'S BIOGRAPHY

Dr Xiaodong Ji is an Associate Professor at Department of Civil Engineering, Tsinghua University. He received his B.E. and Ph.D. of Civil Engineering with distinction from Tsinghua University in 2002 and 2007. Prior to his appointment at Tsinghua University in November 2009, he was a JSPS Postdoctoral Researcher at Kyoto University in Japan. Currently, he serves as Assistant Dean of School of Civil Engineering and Vice Director of the Institute of Disaster Prevention and Mitigation Engineering, Tsinghua University. Dr Ji's research focuses on development of high-performance structural components and innovative systems for enhanced seismic performance and resilience of building structures. He is also engaged in developing advanced dynamic testing methods and monitoring technologies, with the scope of achieving realistic simulation and observation for seismic behavior of structural systems. He has published over 100 referred journal papers and conference papers. Dr Ji's research outcomes have been applied in a number of projects of super-tall buildings and large-scale infrastructures in China. He has served as the committee members for drafting several design codes, specifications and guidelines. He has won the National Science and Technology Progress Award (Second Prize) and the Best Teaching Award of Young Professors in Tsinghua University.

***** All Interested Are Welcome *****
For further information, please contact Prof. Y.L. Xu at Tel. 2766-6050.
Free Admission. Please reserve your seat with Ms. Connie F.Y. Lam by email: fyc.lam@polyu.edu.hk.
Certificates of attendance will be provided to participants who attend the whole seminar.