

ONE-DAY WORKSHOP

Seismic Analysis, Design and Retrofit for Buildings and Infrastructures: From Theory to Practice

Organised by
American Society of Civil Engineers (ASCE), Hong Kong Section
and
Department of Civil and Environmental Engineering, Hong Kong Polytechnic University

Date: 23 August 2013 (Friday)
Time: 9:00 – 17:00 (Registration starts at 8:30)
Venue: PQ305, The Hong Kong Polytechnic University
Language: English

PARTICIPANTS WILL LEARN (from researchers and senior practitioners)

- Fundamental knowledge of earthquakes hazard, ground motions and associated risks
- Geotechnical design considerations
- Structural design considerations
- Case studies in infrastructure, building and bridge projects
- Latest developments in passive control technology and seismic retrofitting

COURSE FEE

Fee	Eligibility
HK\$700	Member of ASCE, PolyU CEE department and supporting organizations; <i>or</i> Early-bird registration (payment on or before 2 Aug 2013, postmarked); <i>or</i> Group registration (≥ 4 person)
HK\$800	Non-member
HK\$300	ASCE Student member (limited seats)

Fee includes lecture notes, tea/coffee and an attendance certificate. Lunch is not included.

Seats are limited. First-come-first-served!

SUPPORTING ORGANIZATIONS (as of 11 July 2013)



PROGRAMME (subject to minor modifications without notice)

8:30 – 9:00	Registration
9:00 – 9:05	Welcoming speech
9:05 – 9:50	Introduction to seismic hazard analysis and ground motion characterization <i>Dr Gang WANG, The Hong Kong University of Science and Technology</i>
9:50 – 10:35	Earthquake ground response <i>Dr Jun YANG, The University of Hong Kong</i>
10:35 – 10:50	Coffee Break
10:50 – 11:35	Seismic design of underground structures: general principles and case studies <i>Dr Chao LI, URS Benaim</i>
11:35 – 12:20	Seismic performance evaluation of critical infrastructure systems: a case study of the water supply system in Los Angeles <i>Dr Yu WANG, City University of Hong Kong</i>
12:20 – 12:25	Souvenir presentation
12:25 – 13:40	Lunch (not included in registration fee)
13:40 – 14:25	Designing for ductility <i>Mr Andrew MOLE, ARUP</i>
14:25 – 15:10	Passive control technology for seismic design of building structures <i>Prof You-lin XU, The Hong Kong Polytechnic University</i>
15:10 – 15:25	Coffee Break
15:25 – 16:10	Case studies of bridge and tall building seismic design <i>Dr Patrick CHEUNG and Dr Goman HO, ARUP</i>
16:10 – 16:55	Seismic Retrofit of Reinforced Concrete Structures using Advanced Composite Material <i>Dr Jian-guo DAI, The Hong Kong Polytechnic University</i>
16:55 – 17:00	Closing remarks and Souvenir presentation
	Attendance Certificate

CERTIFICATE

This course is recommended for one CPD day.

ENQUIRY

Dr. Songye ZHU ceszhu@polyu.edu.hk t: 3400 3964

ABOUT THE SPEAKERS

Dr Gang WANG, The Hong Kong University of Science and Technology

Dr Gang Wang is an Assistant Professor in the Department of Civil and Environmental Engineering at the Hong Kong University of Science and Technology. He graduated with PhD in civil engineering from the University of California, Berkeley in 2005. He is Treasurer of ASCE Hong Kong Section, member of Earthquake Engineering Research Institute (EERI), Seismological Society of America (SSA) and a registered Professional Engineer in the state of California, USA. His research interests include geotechnical earthquake engineering, soil dynamics and engineering seismology. Dr Wang was awarded Li Foundation Heritage Prize in 2010 for his outstanding research contribution in earthquake engineering and geo-hazard mitigation.

Dr Jun YANG, The University of Hong Kong

Dr Jun Yang received his doctorate from Kyoto University in Japan in 2001. He is currently an Associate Professor in the Department of Civil Engineering of the University of Hong Kong. His research interests include earthquake ground response, soil liquefaction, dynamic soil properties, and soil-structure interaction analysis. He has more than 120 peer-reviewed publications in journals and conference proceedings to his credit. Dr Yang is a member of the technical committee on earthquake geotechnical engineering of the International Society of Soil Mechanics and Geotechnical Engineering (ISSMGE) and is also a member of ASCE technical committee on soil dynamics and earthquake engineering. He received the Best Presentation Award at the 55th national conference of the Japan Society of Civil Engineers in 2000, the Humboldt Fellowship from the Alexander von Humboldt Foundation in 2001, and the Outstanding Young Researcher Award from the University of Hong Kong in 2007. A Hong Kong Section Past President, Dr Jun Yang was elected to Fellow of ASCE in July 2012.

Dr Chao LI, URS Benaim

Dr Chao Li spent his undergraduate time in Tsinghua University from 1993 to 1998, and completed his PhD study at Stanford University in 2003 on computational geomechanics. He practiced in New York City, USA from 2003 to 2007 and has been working in Hong Kong since 2007. His PhD thesis was on dynamic response of saturated soils under strong ground motion. As a consulting engineer, he has been involved in design and analysis work for major infrastructure projects including metro stations, Tunnels, Bridges as marine works with significant seismic components. He led the seismic design work in AECOM Asia from 2007 to 2012 and has worked in URS Benaim since 2012. His involvement in seismic engineering includes establishment of seismic design criteria, seismic hazard analysis, ground response analysis, liquefaction analysis, dynamic soil-structure interaction as well as performance-based seismic design.

Dr Yu WANG, City University of Hong Kong

Dr Yu Wang is the current President of ASCE Hong Kong Section. His recent research efforts have focused on seismic risk assessment of critical civil infrastructure systems (e.g., water supply systems), soil-structure interaction (e.g., responses of buried utility pipelines to ground displacement induced by seismic strong motions or urban underground construction activities such as tunneling), and geotechnical risk and reliability (e.g., probabilistic characterization of soil properties using lab/in-situ tests, reliability-based geotechnical designs, probabilistic slope stability analysis). He is a member of several international Technical Committees (TC), including an ASCE Geo-Institute TC on Risk and two ISSMGE TCs on Risk and In-Situ Testing, respectively. Dr Wang has been one of the key players in the development of a decision support system for seismic performance evaluation and mitigation of water supply systems, which has been implemented in the management and decision-making of the water supply system in Los Angeles, one of the largest, geographical distributed water pipeline systems in the world.

ABOUT THE SPEAKERS

Ing Andrew MOLE, ARUP

Ing Andrew Mole is an Associate Director with Ove Arup & Partners in Hong Kong, where he has been for seven years. Previously he was in the San Francisco office for eight years. His Bachelor's degree was in Engineering Science at the University of Oxford and his Master's degree was in Civil Engineering at the University of Washington, Seattle. He is a Chartered Engineer, a member of the IStructE and HKIE and a licensed Professional Engineer in the State of California. He has carried out structural design on seismic projects in California, Japan, Philippines and India, and has advised on projects in Macau and mainland China. In addition he has experience with seismic hazard assessment, seismic retrofit design and non-linear dynamic analysis. He has coauthored papers on seismic structural topics and BIM.

Prof You-Lin XU, The Hong Kong Polytechnic University

Professor Xu You-Lin received his PhD degree from University of Sydney, Australia. He is currently Chair Professor of Structural Engineering and founding Director of Research Centre for Urban Hazards Mitigation at The Hong Kong Polytechnic University. He has conducted research and consulting in structural engineering over three decades with special interests in earthquake engineering, wind engineering, structural health monitoring and structural vibration control. He has been engaged in a number of consultancy projects and published about 200 SCI journal papers. He has received several prestigious awards, including the 2006 Croucher Senior Research Fellowship and the 2012 Robert H. Scanlan Award in recognition of his outstanding research achievements. He is Fellow of The Hong Kong Institution of Engineers and Fellow of American Society of Civil Engineers.

Dr Patrick CHEUNG, ARUP

ASCE Fellow and Hong Kong Section Past President Patrick Cheung retired from Architectural Services Department in 2010. After one year at Tongji University in Shanghai as Kwang Hua Foundation Visiting Professor participating in a research project on innovative bridge bearings, he re-joined Arup in 2012. Patrick completed his PhD at the University of Canterbury, New Zealand.

Dr Goman HO, ARUP

Dr Goman Ho is a Director of Arup which he joined in 1992 after his PhD study at Hong Kong Polytechnic University. His projects cover the East Asia Region including the Philippines, Japan, Korea, Hong Kong, Taiwan and Mainland China. He is a First Class Registered Structural Engineer in the People's Republic of China and has been involved in China projects since 1994. Dr Ho had 20+ years professional experience including more than 10 years on projects in low to high seismicity zones. He was involved in the 597m tall TJJ1 17 building in Tianjin, 3km long Beijing Airport, 320m span National Stadium, and the 300m tall Cheung Kong Center with a 7-level basement. Dr Goman Ho is past president of ASCE Hong Kong Section.

Dr Jian-guo DAI, The Hong Kong Polytechnic University

Dr Dai holds two PhDs, one was in Structural Engineering from Dalian University of Technology in 2000 and the other was in Socio-Environmental Engineering from Hokkaido University in 2003. His major research interests include "fiber reinforced polymer (FRP) composites for construction", "Durability and life cycle management of reinforced concrete structures in marine environments", and "structural applications of fiber reinforced cementitious composites". Dr Dai has co-edited two conference proceedings, published two invited book chapters and more than 100 journal and conference papers and delivered more than 30 invited presentations/talks worldwide. Dr Dai is an executive committee member and a council member of International Institute of FRP in Construction (IIFC), the Chairperson of the technical committee on Design of Asian Concrete Federation (ACF).

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23 August 2013, PQ305, The Hong Kong Polytechnic University

Registration Form

Name : _____
(Last Name) (First Name)

Office Tel.: _____ Mobile: _____

Email: _____ Company: _____

Membership (if applicable): ASCE/ PolyU/ ICE Membership No.: _____

Membership grade: Member/ Associate Member/ Affiliate Member/ Student Member

Group Registration (please use separate sheets as necessary)

No.	Last Name	First Name	Email	Phone
1				<i>(Contact person*)</i>
2				
3				
4				
5				
6				
7				
8				
9				
10				

Payment

I enclose a crossed cheque no. _____ (Bank: _____)

for the amount of HK\$ _____ x _____ person = HK\$ _____

Remarks

- All payments are non-refundable once booking is confirmed
- Please make a cheque payable to "**American Society of Civil Engineers - Hong Kong Section**" and post to:

Dr Songye ZHU, Department of Civil & Environmental Engineering,
Hong Kong Polytechnic University, Hunghom, Kowloon

- Seat will be confirmed when payment is received.
- ASCE Hong Kong reserves the right to cancel or reschedule the conference at its discretion

Enquiry

Dr Songye ZHU

ceszhu@polyu.edu.hk

t: 3400 3964

Campus Map

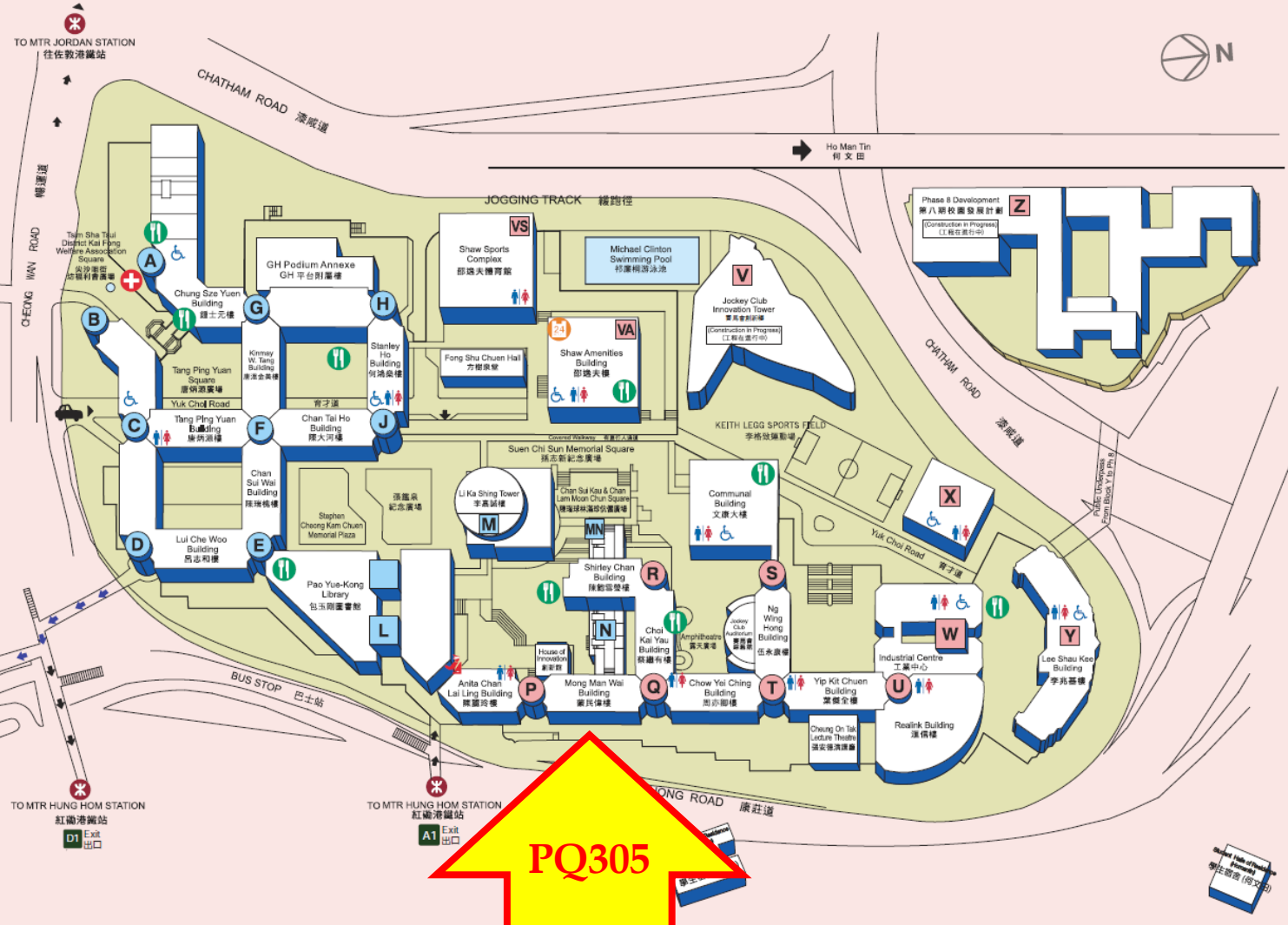
校園地圖

KEY TO CAMPUS MAP 校園索引

	Core		閣下在此 You are here
	Wing		洗手間 Toilet
	Block		傷殘人士洗手間 Toilet for Disabled
	大學醫療保健處 University Health Service		餐廳 / 酒樓 / 咖啡室 Canteen / Restaurant / Cafe
	保安控制室 Guard Post		便利店 Convenience Store

Location Map of Off-Campus Venues 校外場所位置圖

1. PolyU Main Campus 香港理工大學主校園
2. Student Halls of Residence (Hung Hom) 學生宿舍 (紅磡)
3. Student Halls of Residence (Homantin) 學生宿舍 (何文田)
4. Hong Kong Community College (Hung Hom) 香港專上學院 (紅磡)
5. Hong Kong Community College (West Kowloon) 香港專上學院 (西九龍)
6. PolyU Jockey Club Campus 香港理工大學 (九龍)
7. Off Campus Housing (OGH - Shan Tung Street) 校外宿舍 (山東街)
8. Off Campus Housing (OGH - Hillwood Road) 校外宿舍 (山景道)
9. Off Campus Housing (OGH - Yu Chau Street) 校外宿舍 (油蔴地)



Online campus map : <http://www.polyu.edu.hk/fmo/eMap/CampusMap.pdf>