



# ONE-DAY WORKSHOP

# The State-of-the-practice of Tall Building Design and Construction

Organised by

American Society of Civil Engineers (ASCE), Hong Kong Section

and

Department of Civil and Environmental Engineering, Hong Kong Polytechnic University

Date:	22 May 2015 (Friday)
Time:	9:00 – 17:00 (Registration starts at 8:30)
Venue:	Z209, The Hong Kong Polytechnic University
Language:	English

## HIGHLIGHTS OF WORKSHOP

- Fundamental knowledge of tall building design and construction
- Building design optimization
- Building risk analysis
- Case studies of super-tall building projects
- Emerging technology (e.g. BIM and monitoring) in tall building construction

## COURSE FEE

Fee	Eligibility
HK\$700	Members of ASCE, PolyU CEE department and supporting organizations;
	or Early-bird registration (payment made on or before 8 May 2015, postmarked);
	<u>or</u> Group registration ( $\geq$ 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.

## CERTIFICATE

This course is recommended for one CPD day.

#### ENQUIRY

Di. Songye Ziro ceszinesporyu.edu.ik i. 5400.59	Dr. Songye ZHU	ceszhu@polyu.edu.hk	t: 3400 3964
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## PROGRAMME

9:00 – 9:30	Registration
9:30 - 9:35	Welcoming address
9:35 - 10:20	Tianjin Chow Tai Fook Center, Facade Optimization and Design Mr. Chia PAN, RLPHK
10:20 - 10:40	Coffee Break
10:40 - 11:25	Structural design optimization of tall buildings Dr Chun-Man Chan, The Hong Kong University of Science and Technology
11:25 - 12:10	Complex high-rise building structural analyses and design Dr. Fujun Liu, RBS Associates
12:10 - 12:15	Souvenir presentation
12:15 - 13:40	Lunch (not included in registration fee)
13:40 - 14:25	Column design for ultra tall buildings Dr. Goman HO, ARUP
14:25 - 15:00	Seismic demands on RC tall buildings in Hong Kong under rare earthquake action Dr. Ray SU, The University of Hong Kong
15:00 - 15:20	Coffee Break
15:20 - 16:05	Performance monitoring of supertall structures Dr Yong XIA, The Hong Kong Polytechnic University
16:05 - 16:50	The potential of building information modeling (BIM) for tall building design and construction <i>Dr Jack CHENG, The Hong Kong University of Science and Technology</i>
16:50 - 17:00	Closing remarks and Souvenir presentation
17:00	Distribution of CPD Certificates





#### ABOUT THE SPEAKERS

### Mr. Chia PAN, Ronald Lu & Partners (Hong Kong) Ltd

A graduate of the Southern California Institute of Architecture, Mr. Chia has more than 20 years experiences in project management, master planning, architectural and interior design in Hong Kong, China, Southeast Asia, South America and the USA. From award-winning residential, educational and commercial projects in USA, Hong Kong and China to the 530m tall Tianjin Chow Tai Fook Center, Mr. Chia has built up a diverse portfolio of building types that demonstrates his innate ability to merge design and project management from feasibility studies to completion. Since returning to Hong Kong in 1992, he has worked closely with clients and led teams to complete technically complex and fast-track projects that range from exhibition venues, university campus to high-tech industrial project involving technology transfer from Europe to China. Over the years at Ronald Lu & Partners (Hong Kong) Limited, Mr. Chia has led teams in delivering AsiaWorld-Expo, Parc Central retail mall and Poly V-Block office tower in Guangzhou, as well as the on-going Beijing Art Mall & Center and Tianjin Chow Tai Fook Center. His City University of Hong Kong - Academic 3 was awarded with 2013 Honor Award for Architecture by AIA (HK Chapter) and Green Building Award 2012 -Merits.

#### Dr Chun-Man Chan, The Hong Kong University of Science and Technology

Dr C.M. Chan is currently Associate Head and Associate Professor in the Department of Civil Engineering at the Hong Kong University of Science and Technology (HKUST). He received his BSc in 1984 and MSc in 1985 from MIT, and his PhD in 1993 from University of Waterloo, Canada. He is a registered professional engineer and has been involved in research, teaching, and consulting work in the area of tall building design in the United States, Canada and Hong Kong for over 25 years. His current research interests include structural optimization, tall building analysis and design, wind effects on structures and seismic performance based design. The outcome of his research efforts has led to the development of the state-of-the-art technology for analysis and design optimization of tall buildings. The impact of this technology has been demonstrated through a number of high profile tall building projects in Hong Kong and China. Dr Chan has received a number of research and teaching awards, including the 1998 State-of-the-Art Civil Engineering Award by the American Society of Civil Engineers and the 2014 Michael G. Gale Medal for Distinguished Teaching by HKUST. Dr Chan has authored or coauthored more than 120 technical papers and research reports published in professional books, journals and the proceedings of national and international conferences. He is currently the Associate Editor of the Journal of Structural Design of Tall and Special Structures and a member of the editorial board of three other international journals.

#### Dr. Fujun Liu, RBS Associates

Dr Fujun Liu is Vice Managing Director and Vice Chief Engineer of RBS Associates. Currently he is a Visiting Professor at Guangzhou University, Vice Director of Structural Engineering Committee of Civil Engineering and Architecture Institution of Guangdong Province, Expert of Guangdong Province High-rise Building Seismic Fortification Review Committee. As a design consultant or director, he has extensive design experience in a number of high-rise building projects, including but not limited to Guangzhou East Tower (532m), Hefei Hengda Center (510m), Shenzhen Bay China Resources Group Headquarters Building (400m), Nanning Longguang Times Square (380m), Wuhan Chang Yun Center (330m), Yinchuan Yuanhai Bay Sky City (410m), Changsha Yuanda Sky City (350m), Dongguan Chang An Vanke Center (260m), and Guangzhou Victory Plaza (228m), where the last project won First Prize of the Fifth National Excellent Structural Design. He owned five national invention patents related to tall building design and construction.





#### ABOUT THE SPEAKERS

#### Dr. Goman HO, Arup

Dr Goman Ho, an Arup Fellow, a Director of Arup China and Hong Kong, the global leader for Arup Tall Buildings Skills Network and the regional leader for Seismic Skills Network. He has been working in Arup since his postgraduate study in Hong Kong Polytechnic University in 1992. He was the project manager of 300m tall Cheung Kong Center in HK, 700,000m<sup>2</sup> Beijing Fortune Plaza mixed development, 330m China World Trade Center, CCTV, 1km long Beijing Capital International Airport Terminal T3, 320m span Beijing Olympics National Stadium (Bird Nest), Beijing Olympics Aquatic Center (Water Cube), BJ Exhibition and Conference Center (International Broadcasting Center/Fencing Hall), ETON Dalian Center and Beijing South Station etc. Besides the above mentioned finished project, the 600m tall Golden Finance Tianjin 117 project is now finished up to 500m and 528m Z15 is now having the core finished up to ground floor. He is currently responsible for a twin tower project in Shanghai, a 460m tower in Ningbo in China and the 400m+ Vincom Landmark Tower which will be the tallest building both in Ho Chi Minh City and Vietnam. Last but not least, he is currently the project director for the works in drafting the first seismic design standard in Hong Kong.

#### Dr. Ray SU, The University of Hong Kong

Dr. Su is an Associate Professor in structural engineering at Department of Civil Engineering, The University of Hong Kong. Dr Su's research interests include strengthening of reinforced concrete members, seismic modelling of concrete and masonry structures and evaluation of fracture properties of concrete. He has published over 200 technical publications. He is serving as an editorial panel member for the Journal of Applied Mathematics, Structural Engineering and Mechanics and Advances in Concrete Structures, among others. He had developed ductility design guidelines for the Hong Kong Housing Authority and is currently involved in the development of seismic reinforced concrete details and design code for buildings in Hong Kong.

#### Dr. Yong XIA, The Hong Kong Polytechnic University

Dr. Yong Xia is currently the Associate Professor at Department of Civil and Environmental Engineering, The Hong Kong Polytechnic University. He obtained his Bachelor Degree and Master Degree both from Huazhong University of Science and Technology, China, and PhD Degree from Nanyang Technological University, Singapore. He has spent several years in Japan and Australia as Post-doctoral fellow, before joining PolyU in 2006. Dr. Xia's researches mainly focus on structural monitoring; structural condition assessment; and structural dynamics. He has co-authored over 60 refereed journal papers, one academic book, one design standard, and four conference proceedings. He was awarded The Nishino Prize in 2013. Dr. Xia is now one Co-Editor-in-Chief of Advances in Structural Engineering, an international SCI journal.

#### Dr Jack CHENG, The Hong Kong University of Science and Technology

Dr. Jack C.P. Cheng is currently an Assistant Professor in the Department of Civil and Environmental Engineering at the Hong Kong University of Science and Technology (HKUST). He obtained his PhD degree from Stanford University in 2009. His research interests include building information modeling (BIM), data mining and retrieval, supply chain management, construction management, carbon auditing, green buildings, and sustainable construction. He is the Vice President of the Autodesk Industry Advisory Board (AIAB), a Professional Member of the Hong Kong Institute of Building Information Modeling (HKIBIM), and a Certified Carbon Auditor Professional (CAP). He is also a committee member in the ASCE Technical Council on Computing and Information Technology (TCCIT). He has received the Champion Prize of the HKIE Environmental Paper Award in 2012, and the Construction Industry Council (CIC) Young BIMer of the Year in 2015. In 2012, he received the School of Engineering Distinguished Teaching Award at HKUST.





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22 May 2015, Z209, The Hong Kong Polytechnic University

# **Registration Form**

Name :(Let News)	(T:
(Last Maine)	(First Maine)
Office Tel.:	_ Mobile:
Email:	Company:
ASCE Membership No. (if applicable):	

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			(Contact person*)	
2				
3				
4				
5				
6				
7				
8				

#### 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

EnquiryDr Songye ZHUceszhu@polyu.edu.hkt: 3400 3964



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