

One-day Public Seminar

“Advances in Maintenance and Management of Concrete Infrastructures”

Organizer:

Department of Civil and Environmental Engineering & Research Institute for Sustainable Urban Development, The Hong Kong Polytechnic University.

Supporting organizations:

Hong Kong Concrete Institute

American Society of Civil Engineers, Hong Kong Section

Date: 7 September 2018 (Friday)

Time: 9:30 – 16:30 (Registration starts at 9:00 a.m.)

Venue: Room Y305, Lee Shau Kee Building (Block Y), The Hong Kong Polytechnic University, Hung Hom, Hong Kong.

Language: English

Course Fee: Free of charge

Invited speakers (in alphabetical order)

1. Jian-Guo DAI, Professor, The Hong Kong Polytechnic University, Hong Kong, China
2. You DONG, Assistant Professor, The Hong Kong Polytechnic University, Hong Kong, China
3. Michael W. HENRY, Associate Professor, Hokkaido University, Japan
4. Quan-Wang LI, Associate Professor, Tsinghua University, China
5. Koji MATSUMOTO, Project Lecturer, The University of Tokyo, Japan
6. Kohei NAGAI, Associate Professor, The University of Tokyo, Japan
7. Zhong-Xin WU, Senior Engineer, China Communications Construction Company (CCCC), Infrastructure Maintenance Group CO., Ltd, China
8. Hiroshi YOKOTA, Professor, Hokkaido University, Japan

Highlights:

- Life-cycle based maintenance of concrete infrastructures.
- Infrastructure maintenance technologies in Japan, Hong Kong and Asia.
- Bridge maintenance.
- Deterioration of concrete infrastructures.
- Corrosion prevention.
- Durability design.
- Asset management.
- Surface protection.

PROGRAMME

09:00-09:30	Registration
09:30-09:40	Opening speech
09:40-10:10	Asset management of infrastructure Prof. Hiroshi Yokota (Professor, Hokkaido University, Japan)
10:10-10:40	Risk and sustainability-informed assessment and management of aging structural systems Dr. You Dong (Assistant Professor, The Hong Kong Polytechnic University, Hong Kong, China)
10:40-11:00	Coffee break
11:00-11:30	Current status of infrastructure in Japan and utilization of bridge database for maintenance Dr. Kohei Nagai (Associate Professor, The University of Tokyo, Japan)
11:30-12:00	Performance assessment of damaged suspension bridges by structural analysis and spatial measurement: an example of infrastructure management Dr. Koji Matsumoto (Project Lecturer, The University of Tokyo, Japan)
12:00-14:00	Lunch break
14:00-14:30	Inspection, strengthening and maintenance technologies for in-service deep water bridge foundation Mr. Zhong-Xin Wu (Senior Engineer, CCCC, Infrastructure Maintenance Group CO., Ltd, China)
14:30-15:00	Technology transfer for infrastructure life cycle management: examples for Asia Dr. Michael W. Henry (Associate Professor, Hokkaido University, Japan)
15:00-15:20	Coffee break
15:20-15:50	Model-based durability design of concrete structures in Hong Kong- Zhuhai-Macau sea link project Dr. Quan-Wang Li (Associate Professor, Tsinghua University, China)
15:50-16:20	Surface treatment technology for preventive maintenance of concrete infrastructure Prof. Jian-Guo Dai (Professor, The Hong Kong Polytechnic University, Hong Kong, China)
16:20-16:30	Closing

ABOUT THE SPEAKERS



Prof. Hiroshi Yokota

Prof. Hiroshi Yokota is a professor of Faculty of Engineering, Hokkaido University, Japan. He received his PhD from Tokyo Institute of Technology, Japan. He had worked for Ministry of Transport and Port and Airport Research Institute, Japan and then was appointed to a professorship in 2009 at the university. He is now President of Asian Concrete Federation (ACF). His recent research interests include the life-cycle management of civil infrastructure including durability design, performance evaluation, prediction, and interventions. He currently tries to incorporate the sustainability indicators in the life-cycle management system for decision making in which social, economic and environmental aspects would be objectively evaluated. He is now a convenor of ISO/TC71/WG1 “Life-cycle management of concrete structures.”





Dr. You DONG

Dr. You Dong is an assistant professor of structural engineering at the Department of Civil and Environmental Engineering of The Hong Kong Polytechnic University. Dr. Dong received his Ph.D. degree in Structural Engineering from Lehigh University, USA. His research mainly focuses on the development of the next generation of civil and marine structures incorporating risk, resilience, and sustainability in a life-cycle context. Specifically, he has formulated possible solutions to the significant quandaries: how can we make our cities and communities safer, more resilient, and more sustainable. Overall, his background is interdisciplinary, encompassing traditional topics of structural engineering, probabilistic risk assessment, life-cycle analysis, optimization and robust decision making, sustainable infrastructure development, and engineering economics. He has served as the committee member for several ASCE-SEI Technical Councils (Multi-Hazard and Life-Cycle Performance, Safety, Reliability and Risk).

ABOUT THE SPEAKERS

	<p>Dr. Kohei Nagai</p> <p><u>Dr. Kohei Nagai</u> is an associate professor of International Center for Urban Safety Engineering (ICUS), Institute of Industrial Science, The University of Tokyo. After he received PhD from Hokkaido University, Japan, in 2005, he spent for two years as JSPS Post-Doctoral Research Fellow at Swiss Federal Institute of Technology Zurich (ETH). Then, he was appointed as an Assistant Professor in 2007 at The University of Tokyo. He is in the current position since 2011. His research interests are in the field of structural engineering and its management. He is doing researches on meso-scope simulations of concrete materials and reinforced concrete structures, mechanics of fiber reinforced cementitious composites, analysis and utilization of road and bridge inspection database, and infrastructure management for developed society.</p>
	<p>Dr. Koji Matsumoto</p> <p><u>Dr. Koji Matsumoto</u> is a project assistant professor of International Center for Urban Safety Engineering, Institute of Industrial Science, The University of Tokyo, Japan. He received PhD from Hokkaido University, Japan in 2008. After he spent as a post-doctoral fellow for one year, he was appointed as an assistant professor at Tokyo Institute of Technology in 2010. He is in the current position since 2015. His research interests are in the field of structural concrete and its analyses. He is doing researches on repair and strengthening technologies, evaluation of remaining performances of damaged structures, and application of new materials. At the current position, he is mainly charge of an international expansion of infrastructure management technologies in the Strategic Innovation Promotion Program (SIP) which is steered by the cabinet office, government of Japan.</p>

ABOUT THE SPEAKERS

	<p>Mr. Zhong-Xin Wu</p> <p><u>Mr. Zhong-Xin Wu</u> is a chief engineer of China Communications Construction Company (CCCC), Road and Bridge Special Engineering CO., Ltd. which is a major subsidiary of CCCC, Infrastructure Maintenance Group CO., Ltd., China. He graduated from Wuhan University of Technology in 2006 with a master's degree in structural engineering and obtained a best thesis award. Since 2007, he has been working in CCCC, Road and Bridge Special Engineering CO., Ltd., and served as the deputy director of the technical Center. He is currently a chief engineer of the operation and maintenance department. He has been engaging in the research and practice field of bridge inspection, strengthening design, strengthening construction, construction monitoring and bridge maintenance, focusing on the research and development of stay cable replacement, ultra-deep water bridge pier protection, bridge pier strengthening, bridge demolition, etc. He participated in the preparation for a local standard of the "Technical Regulations for the Replacement of Stay Cables". So far he owned 30 national patents and published 17 journal articles in the field of bridge inspection, strengthening and maintenances. He has participated or taken charge in the strengthening and maintenances of many large bridges such as Chongqing Lijiatuo Yangtze River Bridge stay cable replacement and bridge pier strengthening projects, and the Nanjing Yangtze River Bridge maintenance and renovation project, etc.</p>
	<p>Dr. Michael W. Henry</p> <p><u>Dr. Michael W. Henry</u> is an associate professor in the Faculty of Engineering, Hokkaido University, Japan. He received his Bachelor degree from the University of Washington (USA) in 2005, and his PhD from The University of Tokyo (Japan) in 2010. He worked as a project researcher at the Institute of Industrial Science (The University of Tokyo) for almost two years before joining Hokkaido University in 2012. His research activities are focused on the sustainability of social infrastructure, particularly the development of new analytics for the sustainability evaluation of concrete materials and structures. Recently, he is also interested in non-destructive testing and maintenance management, including international training and transfer of asset management technologies.</p>

ABOUT THE SPEAKERS



Dr. Quan-Wang Li

Dr. Quanwang Li is an associate professor in the Department of Civil Engineering at Tsinghua University, Beijing, China. He also works as an international collaborator of the NIST-sponsored Center of Excellence for Risk-based Community Resilience Planning. Dr. Li got the bachelor and master degrees in the Department of Civil Engineering at Tsinghua University in 1999 and 2001, respectively, and Ph.D. degree in the school of civil and environmental engineering at Georgia Institute of Technology in 2006. His work focuses on applications of statistics and probability in civil engineering, structural safety and reliability assessment, and the time-dependent performance and reliability of deteriorating structures exposed to natural hazards. Dr. Li has authored or co-authored more than 100 research papers and reports, and he serves on the editorial board of Structural Safety.



Prof. Jian-Guo Dai

Prof. Jian-Guo Dai is a professor of structural engineering at the Department of Civil and Environmental Engineering of The Hong Kong Polytechnic University. Prof Dai's main research area is innovative materials and structural systems for sustainable construction. He has authored more than 240 papers in academic journals and international conferences. His research work was recognized by a number of academic awards including the "Best Basic Research Paper Award" from ASCE, Journal of Composites for Construction. Prof. Dai is active in international research communities. At present, he is Chair of the Technical Board of Asian Concrete Federation (ACF), Vice President of the International Institution of FRP Composites for Construction (IIFC) and Vice Chair of FRP Application Committee of China Society of Civil Engineering. He is Editor of the SCI journal "Advances in Structural Engineering" and serves a few journals as the editorial board member.

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Name: _____
(Last Name) (First Name)

Office Tel.: _____ Mobile: _____

Email: _____

Company:

Group registration

(Please fill in the above section with the contact person's information)

No.	Last Name	First Name	Email	Phone
1	*Contact person			
2				
3				
4				
5				
6				

Enquiry

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Secretary

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Please send the above registration form to Mr Peng by 31 August 2018

- Seat will be confirmed when the registration form is received.
- PolyU CEE reserves the right to cancel or reschedule the seminar at its discretion.

