IES EVENING TALK ON
“CONSTRUCTION KNOW-HOW AND TECHNOLOGY PROJECTS”

Organized Jointly:
IES Overseas Infrastructure Project Technical Committee and IES/IStructE Joint Committee

PROGRAMME DETAILS

Date: 12 October 2018
Time: 6:00pm – 10:00pm
Venue: IES Auditorium
70, Bukit Tinggi Road, Singapore 289758.

CPD Programme: 2 STU (Structural) – (Approved) / 3 PDU (Approved)
Fees: IES Members = $32.10/- per pax; Non-members = $64.20/- per pax
*Fees inclusive of 7% GST & dinner

Contact Person: Mr. Don Chen
Tel: 64611305
Email: don.chen@iesnet.org.sg

**Talk Outline**

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Effective Use of DfMA Technology

CV of Er. Lim Chong Sit:

Er. Lim Chong Sit graduated from the University of Sheffield, UK. He is a Fellow of Institution of Engineers Singapore, Accredited Checker, Chartered Professional Engineer, Australia and ASEAN CPEng. He is also one of the Design for Safety Professional.

Er. Lim is the Managing Director of Robin Village International Pte Ltd (RVI) a wholly owned subsidiary company of Tiong Seng Contractors (Pte) Ltd. Mr Lim is responsible for overseas precast business as well as the PPVC production business in Singapore. He is also a Director in High Tech Precast Ltd (JV Company in Myanmar) and Geostr-RV Pte Ltd (JV Company in Spore) producing building and tunnel segments respectively.

Er. Lim Chong Sit has worked in Statutory Board (HDB), and was responsible for the implementation of precast technology in HDB building projects. He was also responsible (as the QP) for the first in-house design of a fully prefabricated building for HDB’s housing project. These include precast walls, columns, beams, normal reinforced slab and pre-stressed slab.

Abstract / Synopsis

DfMA technology has been used in Singapore since the early 80s. Since then, the usage has evolved from producing and installing simple precast components to fully assembled prefabricated modules such as PBU (Prefabricated Bathroom unit) and PPVC (Prefabricated Pre-finished Volumetric Construction).

In order to use the technology effectively, there is a need to understand basic design production and installation requirements. This seminar is to share production and installation requirements and to impact some of the key points that need to be considered when using the technology.
BIM, Robotics, IDD, AI, Construction Digitization and More

CV of Professor Robert Tiong:

Prof. Robert Tiong is an Associate Professor in School of Civil & Environmental Engineering, as well as Deputy Director of Centre for Infrastructure Systems and Centre for Robotics Research Centre at Nanyang Technological University, Singapore. He is the Program Director of the MSc Programme in International Construction Management.

Prof. Robert Tiong is a Professional Engineer in Singapore since 1990 and a Member of the BCA Second BIM IPE (2015-2017).

Prof. Tiong has extensively published journal papers, including being the co-author of book chapter “Productivity through Management Control – Case: The UOB Plaza” in the Singapore Productivity Case Book, a joint publication between NTU and the former National Productivity Board, Singapore. Recently, he has been involved in the study of Smart Crane for Precast projects in Singapore. His research have been working on BIM based IDD for Lean Construction, Precast, Prefabrication, DFMA, PPVC, PBU, Productivity Evaluation and Improvement, BIM/VDC for Precast/PPVC and Automation and Robotics in Construction, Decision Aids for Tunneling (DAT).

Abstract / Synopsis

This presentation will cover the development of a BIM-based Smart and Semi-Automated Precast Elements Logistics Management and Installation System, and current/future research works on Integrated Digital Delivery, automation and robotics for construction. The project objectives are enhancing the productivity, efficiency and safety of the Precast Elements Logistics Management, Hoisting and Installation process of housing projects through integrated BIM-Positioning System and sensor-based semi-automated navigation system.

Developed by NTU researchers, the "smart crane" system was tested at the Signature project at Yishun executive condominium site by Kimly Construction. In the future, the system could possibly allow cranes to be operated remotely. The NTU Team will be testing the system with partners such as national industrial developer, JTC Corporation, while Kimly Construction is keen to continue using the system in suitable future projects.

This presentation will also cover the implementation of robotics in precast modular manufacturing plant and covers automated UAV façade defect detection, LTA underground project process improvement and more.
The Role of Lean Construction in Integrated Digital Delivery

CV of Professor Dr. David Chua Kim Huat,

Professor Dr David Chua Kim Huat is a registered professional engineer in Singapore and is currently a Professor in the Department of Civil and Environmental Engineering at the National University of Singapore. He is also Deputy Head, Research for the Department and Director for Faculty of Engineering Development. He has obtained his PhD degree in 1989 from University of California, Berkeley, USA, majoring in construction management. He has more than 30 years of research and practical experience in the industry.

His research interests in the recent years have been in lean construction, computer integrated and IT-based construction management, BIM, construction simulation, risk management and construction safety. Arising from his research works, he has written over 180 technical publications, edited two books, and contributed a chapter to two books. He had been a Council Member of the Society of Project Manager from 2001-2005, and is a council member of System Safety Society since 2006. He is appointed member of BCA’s International Panel of Experts on BIM, and also appointed Honorary Fellow of WSHi till mid-2018. He is also a member of the Construction Research Council, USA and a member of the American Society of Civil Engineers, USA. He had served as the specialty editor for Cost and Scheduling for the Journal of Construction Engineering and Management, ASCE, and in the editorial board with other international journals and several international conferences.

Abstract / Synopsis

Digital technology is bringing about an unprecedented transformation in the construction industry. Nevertheless, because of the fragmentation in the industry, there remains the need to ensure that the processes are well coordinated to reduce significant inherent wastes. Lean construction employs lean optimisations to the construction process to improve project performance and productivity. Lean translates to utilising less resources, effort, cost, manpower to achieve more value. It make processes more stable, reliable and efficient. Studies have shown that the application of Lean Construction methods in project delivery process has resulted in reduction of completion time by almost 30% and up to 15% reduction in costs.
Project Evaluations for Singapore and Overseas Projects

CV of Er. Dr. Ho Kwong Meng:

Er. Dr. Ho Kwong Meng, PhD, MSc, BSc(Hons), PEng (S), FIES, FIstructE, MICE, CEng, CMILT & Dip.BA.

Er. Dr. Ho is currently a Council Member of IES, Chairman of Overseas Infrastructure Project Technical Committee, Vice-Chairman of IES/ISTRUCTE Joint Committee and Chairman of Structural Division of C&S Technical Committee. He is a Consultant on Port and Building Engineering.

For the last 40 years, he has involved in planning, design & supervision of construction of several major seaport projects and a shipyard project in Singapore, a hydraulic boat lock project in Malaysia and involved in due diligence for several overseas seaport investment projects and overseas port planning projects.

Abstract / Synopsis

In this Talk, emphasis will be given to Financial Evaluation, while other types of Evaluations will be also be briefly discussed. Furthermore, some latest management theories related to project evaluation, i.e. Risk Management, Cost-benefit Analysis, Value Engineering, Just-in-Time, Re-engineering and Benchmarking etc. will also be briefly introduced.
**TERMS & CONDITIONS**

**Registration**
1) Registration is based on first come first served. Please click HERE to register
2) Booking through website will be more viable for tracking purposes.

**Payment Mode**
1. Payment via VISA/Master online
2. Payment via AXS Machine. Remember to retain your receipt for verification.
3. Payment by Crossed Cheque payable to “IES”

*For cheque payment, please indicate Participate name & Event name at the back of the cheque and send to:

   The Institution of Engineers, Singapore
   70 Bukit Tinggi Road
   Singapore 289758
   Attn: Don Chen

**Confirmation of Course**
Confirmation of registration will be given 5 days prior to the commencement date of event via email. Otherwise, please call Mr Don Chen @ 6461 1305 to check on your confirmation. (Please remember to check your Junk/Spam folder if you did not receive the confirmation)

**Cancellation**
In the event that participants are not able to attend, please inform us in writing at least 3 working days before the event date. Otherwise full payment is still applicable even if you did not turn up for the talk.