



Final Announcement

HALF-DAY WEBINAR

on

Design and installation of post-installed reinforcements

Organised by
Department of Civil Engineering, The University of Hong Kong
and
HILTI (Hong Kong) Limited

Supported by
Structural Division, The Hong Kong Institution of Engineers, Institution of Civil Engineers, Hong Kong and
Centre for Innovation in Construction & Infrastructure Development, The University of Hong Kong

Date: 17 December 2021 (Friday)
Time: 14:00 - 17:00 (Hong Kong time)
Format: Webinar

SYNOPSIS

Post-installed reinforcements (PIR) use adhesive or cementitious grout to bond the reinforcements and concrete together. They are used in specific situations in new construction to simplify construction procedures and provide flexibility in design and construction. They are also frequently used in horizontal, vertical, and overhead applications on the rehabilitation and strengthening of existing structures. This half-day webinar aims at introducing the good practice on the installation and design of PIR. Commonly used adhesion systems, base materials and installation process of PIR will be demonstrated. The design philosophy of PIR for simply supported and moment connections based on the rebar anchorage (RA) and strut-and-tie (S&T) design procedures will be presented. In addition, recent development of improved bond-strength design approach for PIR systems will be discussed.

Language: English

CPD Credit: This webinar is recommended for three CPD-hour credits.
e-Certificate of Attendance will be issued to attended participants.



PROGRAMME RUNDOWN

Time	Topic	Speaker
14:00 – 14:05	<i>Introduction to the use of Webinar</i>	
14:05 – 14:10	Opening Address – Ir Prof Francis AU Head of the Department of Civil Engineering, HKU	
Chairman: Ir Dr Ray SU		
14:10 – 14:45	Overview of PIR adhesion systems and installation method	Mr Isaac MAK <i>Hilti (HK) Limited</i>
14:45 – 15:00	<i>Demonstration for the Installation of PIR</i>	
15:00 – 15:35	General design philosophy for PIR	Dr Daniel LOOI <i>Swinburne University of Technology, Malaysia</i>
15:35 – 15:45	<i>10-min Break</i>	
15:45 – 16:20	Moment connection design for PIR	Ir Dr Augustus LEE <i>RMIT, Australia</i>
16:20 – 16:55	PIR development in future – improved bond-strength approach	Mr Isaac MAK <i>Hilti (HK) Limited</i>
16:55 – 17:00	Closing Remarks – Ir Michael LEUNG, General Manager, HILTI (HK) Ltd	

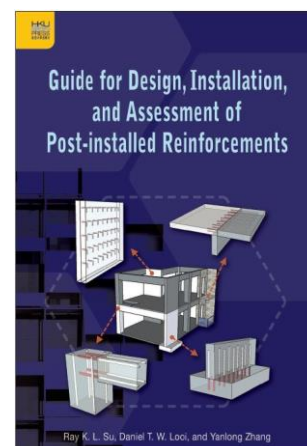
(This programme might be subject to minor modifications without further notice.)

Registration fee: HK\$750 per person (*non-refundable*)

The registration fee includes a Guide for Design, Installation, and Assessment of Post-installed Reinforcement, Hong Kong University Press, 2020.

All payments are non-refundable.

Registration: Please visit our website: <http://www.civil.hku.hk/PIR21/> for online registration. The deadline for the registration will be on **3 December 2021 (Friday)**.



Enquiries: For general enquiries, please contact Ms Ruby Kwok:
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Please visit our website: <http://www.civil.hku.hk/PIR21/>

ABOUT THE SPEAKERS

Dr Daniel LOOI is currently a senior lecturer and course coordinator for the civil engineering programme at Swinburne University of Technology, Sarawak campus, Malaysia. He is a chartered professional engineer (structural) of Engineers Australia and a working group (WG) member for the Malaysian national code development in EC1-1-6 and EC8-1. He is currently chairing the WG for the Malaysian EC2-4: Design of fastenings for use in concrete. He obtained his bachelor's degree in civil engineering from The University of Malaya and his PhD in structural engineering from The University of Hong Kong (HKU). He was a postdoctoral fellow in the Department of Civil Engineering of HKU. Daniel has published research works in seismic engineering, concrete mechanics, modular buildings, and fastening technologies, which include post-installed reinforcements. He is the recipient of the HKIE Outstanding Paper Award for Young Researcher/Engineer in 2015. In his earlier career, Daniel worked as a structural application engineer in a multinational company, specialised in structural analysis and design computation for buildings and plants.



Ir Dr Augustus LEE is an RPE and a certified CIC BIM manager. He is a consultant of the RMIT University and an Instructor of CPD. He obtained his BEng (1st Hons), LLB and MPhil in the U.K. He also has a MSc (Distinct) awarded by the HKUST. He was a corresponding member of the IStructE in the BIM panel and Safety, health and wellbeing panel. Currently, he serves the ICE as a Structures Expert in the panel. He has a number of publications and research projects on finite element analysis, modular integrated construction, retrofitting technology and GIS application.



Mr Isaac MAK is currently the technical leader of Hilti (HK) Ltd. He has been working with the company for 13 years and is specialized in cast-in and anchor fastening design technology as well as post-installed rebar (PIR) applications development. In his role with the company he is leading a team which provides professional design advices and demonstration on related products. In addition, he works closely with the European based R&D team on developing new design methodology of PIR, customization and adoption of European based standard in HK and finite element software development. His current projects with the company are development on flexible plate design with fasteners by finite element analysis, improved bond strength method on PIR design, aging effect study on fasteners and fire behaviour prediction on PIR adhesive.

