



IIE Seminar

Thursday 13th June 2024

AGB Seminar room

12:30-13:00 Pizza

13:00-14:00 Seminar

Digitalising the Built Environment for Improved Efficiency, Reliability and Liveability

Professor Thomas Ng, City University of Hong Kong

Abstract:

While digitalisation is becoming increasingly popular in today's world, its application in the building and infrastructure sector remains rather stagnated compared to the other sectors. Yet, the recent advance of digital twin has triggered researchers to think more innovatively on how this disruptive technology can be applied to enhance the efficiency, reliability and liveability of the built environment. Despite that, the industry lacks a comprehensive framework to maximise the full advantage of digitalisation. It is imperative to develop a well-defined digitalisation plan right from the start so that useful digital data can be solicited not just for the planning, design and construction purposes, but also for uplifting the operational efficiency and reliability of built facilities as well as for supporting strategic and policy decisions. Through which, sustainable, smart and resilient buildings, infrastructures and cities can be realised. Digital transformation, therefore, requires the industry to shift from the current project-based digitalisation mindset to a centralised digital data sharing paradigm.

Bio:

Thomas is Associate Vice-President (Campus Development, Facilities and Sustainability) and Head of Department of Architecture and Civil Engineering at City University of Hong Kong. As Chair Professor of Smart and Sustainable Construction, his research interests cover a wide range of topics not least low carbon built environment, community resilience, smart city, construction informatics, infrastructure asset management, construction productivity, etc. Over the years, Thomas has secured more than a hundred competitive research grants amounting to over GBP 13.5 million. He has published over 430 scholarly items, and half of which are refereed journal papers. Thomas is a Member of Technical Committee of Thermal Performance and Energy Use in the Built Environment set up by the International Organization for Standardization (ISO/TC163), and he is a Fellow of Institution of Civil Engineers, Royal Institution of Chartered Surveyors and Chartered Institute of Building.

