Recorded Webinar Talk

PREFABRICATED BUILDINGS, DESIGNS, MANUFACTURING AND ON-SITE CONSTRUCTION FOLLOWING A DFMA FORMAT

The Institution of Engineers, Malaysia

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In Conjunction with World Engineering Day Celebration 2025 3rd March - 7th March 2025

7th March 2025
(Friday) 4.30pm - 6.30pm

Zoom Virtual Platform

BEM APPROVED CPD HOURS: 2
Ref: IEM24/HQ/014/T (w)

REGISTRATION FEES
IEM Students: Free
IEM Members: RM15 (Online)
Non-IEM Members: RM70

Our Website
www.myiem.org.my

Speaker

Dr Tharaka Gunawardena

Synposis

Malaysia’s prefabrication is branded as Industrialized Building Systems (IBS) and mostly is at the element (beam, column and hollow-core slab) stage. It will be beneficial to know more about the advancement in prefabrication technology from an international perspective, i.e., Australia. This talk will cover an overall view of prefabricated buildings, their design, manufacturing and on□site construction following a Design for Manufacturing and Assembly (DfMA) format. It can be summarized into a few main areas as follows: Introduction to important concepts behind prefab and modular buildings and their structural design. Modularization and approach conceptual design considering DfMA Learn what is different in the assessment of loads and support conditions as they apply to prefab structures (considerations of transportation, lifting and handling in the design) Understand opportunities and barriers to entry if you are anticipating converting current design and construction methods into the prefab

Speakers Biodata

Dr Gunawardena is a Research Fellow at the University of Melbourne undertaking research in many areas such as structural engineering, offsite manufacturing, design optimisation, building information modelling, prefabricated buildings, timber composites, acoustic performance of structures, recycling and upcycling of waste materials, wind effects on tall buildings and shear behaviour of concrete. He currently serves as a CI (chief investigator) for many Australian government grants including the recently commenced "Advanced Timber Hub" while leading projects currently and in the past under many such grants including the widely-known "Centre for Advanced Manufacturing of Prefabricated Housing (CAMPH)". Dr Gunawardena is a member of the newly formed Australian Standards Committee BD111 on Prefabricated Buildings and also a working group committee member for the Australian Standard on Design of post-installed and cast-in fastenings in concrete – AS5216. He is also a lecturer for the subjects ‘High rise structures’, 'Steel Composites in Modern Construction’ and ‘Building information modelling – BIM’ at the University of Melbourne: He serves as the principal supervisor for the University’s industry online short course on the structural design of prefabricated buildings that has attracted many local and international industry-based learners over the last two years. He obtained a degree in BSc (Eng) Hons, Civil Engineering from the University of Moratuwa, Sri Lanka (2008), and a PhD in Structural Engineering from The University of Melbourne, Australia (2017).