Half Day Seminar

Practical Applications of Prestressed Concrete in Buildings and Bridges

Synopsis

Prestressed concrete has become a key structural solution in modern construction, offering enhanced serviceability, improved structural efficiency, and the ability to achieve longer spans compared to conventional reinforced concrete. While initially developed and widely adopted in bridge engineering, its application has expanded significantly into building and other infrastructure projects.

This presentation introduces the fundamental principles of prestressed concrete design and highlights key considerations during planning, design, and construction. Participants will gain insight into practical applications, common construction methodologies, site activities, and challenges encountered in implementation. The session will also provide an overview of bridge engineering, including common bridge forms used in Malaysia, and discuss the fundamental differences between designing buildings and bridges.

By the end of the session, participants will have a better understanding of prestressed concrete systems and their practical applications, benefits, and value in modern building and infrastructure development.

IEM
The Institution of Engineers, Malaysia
(Penang Branch)

In collaboration with

ARUP

25 Sept 2026 (Fri)

9.00.am – 12.30pm

IEM PENANG OFFICE
1-04-02, E-Gate, Lebuh Tunku 2
11700 Gelugor, Penang

BEM CPD Hours: 3
Ref: IEM26/PG/382/S

IEM Member: FOC

Non-IEM Member: RM60

REGISTER NOW
iempenang.org

Time	Details
8.30am - 9.00am	Registration
9.00am - 10.30am	Session 1
10.30am - 11.00am	Tea Break
11.00am - 12.10pm	Session 2
12.10pm - 12.30pm	Q&A - End

About the Speakers

Ir Tan Jiunn Ming graduated with an Honours degree in Civil Engineering from the University of Malaya in 2009. With over 17 years of experience, he has developed expertise in the design and construction of prestressed building structures and long-span bridges, both locally and internationally. He began his career as a building structure engineer and working on a diverse range of projects including warehouses, exhibition halls, high-rise buildings, and refurbishment works.

He subsequently expanded his skillset into bridge engineering and later served as Technical Manager at an international prestressing specialist contractor, where he specialized in post-tensioned structural design consultancy and sub-contracting works for both bridge and building structures. Currently, Jiunn Ming is an Associate at Arup Jururunding Sdn Bhd, where he leads the Bridge and Civil Structure team in our Malaysia office. His experience spans conceptual and feasibility studies, detailed design, and construction implementation of prestressed structures across building and infrastructure projects.

Punithan Palanivaloo is an Associate at Arup and a civil and structural engineering professional with over 19 years of experience in the planning, design, and delivery of major transportation and infrastructure projects. He holds a Bachelor of Civil Engineering degree from the University of Malaya and has extensive expertise in bridge engineering, elevated structures, railway infrastructure, and highway-related developments.

Throughout his career, Punithan has been involved in various stages of project delivery, including feasibility studies, planning, detailed design, independent design review, project coordination, and construction support. His experience spans a wide range of structural and infrastructure projects, providing him with deep technical knowledge and practical insights into the challenges of delivering large-scale engineering developments