

Half Day Workshop for Practical Structural Modelling and BIM Training

Details

Organised by
Civil and Structural Engineering
Technical Division, IEM
In Collaboration with CYPE and
Taylors Univeristy

Date :
22nd April 2026, Wednesday ✓

Time :
8.30am - 1.00pm ✓

Venue :
X-Space classroom
Taylor's University ✓
1, Jln Taylors,
47500 Subang Jaya

CPD HOURS : 3.0 HOURS CPD ✓
REF NO.: IEM26/HQ/155/W

Registration Fees
IEM Member : Free Admission ✓
Non Member : RM75

Register Now ! Limit
to 30 pax only





Morning Session

08:30 – 08:45

Welcome & Introduction

Overview of the workshop scope, focusing on BIM-based structural design workflows using CYPE within an Open BIM environment. Introduction to the software ecosystem, data structures, and the role of IFC-based interoperability in multidisciplinary coordination.

08:45 – 09:15

BIM Project Setup

Configuration of a BIM project using Open BIM methodology, including model structuring, assignment of reference systems, and definition of project parameters. Participants will establish the analytical model, define load cases and combinations, and ensure consistency between physical and analytical representations.

09:15 – 10:30

Reinforced Concrete Design (RCD)

Development of a reinforced concrete structural model, including geometry definition, material properties, and load application. Execution of structural analysis and design according to relevant codes, with emphasis on internal force distribution, reinforcement detailing, and automated code-checking procedures. Discussion of modelling assumptions and their impact on design results.

10:30 – 10:45 Coffee Break

10:45 – 11:30

Steel Structure Modelling

Creation and analysis of steel structural systems, including member definition, cross-section assignment, and stability considerations. Participants will evaluate structural behaviour under different load scenarios, addressing buckling, load paths, and model accuracy within the BIM-integrated environment.

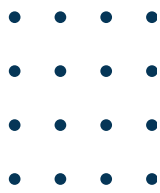
11:30 – 12:15

Connection Design & Interoperability

Detailed modelling and verification of structural connections, including force transfer mechanisms and constructability considerations. Emphasis on interoperability workflows, demonstrating bidirectional data exchange via IFC and coordination between analysis, detailing, and BIM authoring tools.

12:15 – 12:30 Wrap-up, Q&A & Lucky Draw

Technical recap of the workflow, highlighting key modelling strategies, verification procedures, and integration principles. Open Q&A session addressing specific use cases, followed by the lucky draw and issuance of Certificates of Completion and CPD recognition.



Synopsis

This session focuses on a hands-on technical workshop centered on BIM-based structural design workflows using CYPE software. Participants will follow a complete, integrated process, starting with BIM project setup and progressing through reinforced concrete design, steel structure modelling, and connection detailing. The session emphasizes structural analysis, load definition, code-based verification, and consistency between analytical and physical models, while also addressing interoperability through IFC-based data exchange. The objective is to provide practical, application-oriented experience aligned with real engineering design and coordination workflows.

Speaker's Biodata

Afonso Miguel Solak is a Civil Engineer based in Spain, where he has developed his professional career for more than twelve years, serving as Corporate Development Director at CYPE Software. Throughout his career, he has been actively involved in the digital transformation of the AEC sector, delivering lectures and training sessions across America, Europe, Asia, and Africa on the application of BIM technology. His academic background includes a PhD in Civil Engineering from the University of Alicante, with research on lightweight concrete and construction materials. He also studied at universities in Brazil and Italy, consolidating an international academic background. He is currently engaged in the scientific dissemination of this area, and his research results can be consulted on his ORCID profile: <https://orcid.org/0000-0003-1327-3625362>

