Organised by :
Civil & Structural Engineering Technical Division,
CSETD & Hertford System Sdn Bhd

ONE DAY WORKSHOP ON

DIGITAL ENGINEERING IN STRUCTURAL DESIGN FROM BIM MODELLING TO STRUCTURAL ANALYSIS AND DOCUMENTATION



SPEAKERS:

Ir. Mun Yew Fai



Dr. Afonso Solak



Wan Muhammad Hafiz



Mr Lee Siak Hong



28 October 2026, Wednesday
8:30 am - 5:30 pm
MyBIM Centre, KL

Registration fee (Subject to 8% SST)

GRADE	FEE
IEM Member	RM 15
Non-IEM Member	RM 150

BEM Approved CPD: 7
Ref. No.: IEM26/HQ/490/W

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SYNOPSIS

This workshop explores how digital engineering is transforming the way civil and structural engineers design, coordinate and manage engineering information throughout the project lifecycle. The programme begins with an overview of digitalisation in structural engineering, including the growing role of BIM, automation and integrated digital workflows, followed by an introduction to Open BIM practices for structural projects.

The technical sessions will then demonstrate integrated structural and multidisciplinary design workflows, covering structural modelling and connection engineering, coordinated MEP design, and the use of IFC-based models for multidisciplinary coordination and information exchange. Participants will gain an understanding of how connected BIM workflows can improve design consistency, coordination and engineering decision-making across different disciplines. The afternoon programme extends the digital design lifecycle into foundation and geotechnical engineering, highlighting the relationship between structural loads, foundation behaviour, soil–structure interaction, settlement, stability and groundwater conditions, supported by connected engineering information and collaborative design review.

The workshop concludes by exploring how digital engineering information can continue to provide value beyond design through intelligent asset operations. The evening session will introduce the connection between digital models and real-time asset information, including asset performance monitoring, energy usage, operational conditions and data-driven lifecycle decision-making.

Overall, the workshop aims to provide participants with a broader understanding of how integrated digital workflows can connect structural design, multidisciplinary coordination, foundation and geotechnical engineering, and intelligent asset operations across the engineering lifecycle.

PROGRAMME

Time	Description	Speaker
8:30am – 8:50am	**Registration**	
8:50am – 9:00am	**Welcoming Address**	
9:00am – 9:30am	**The Future of Structural in Digital Engineering** • How BIM, automation and digitalisation are changing structural engineering practice • The evolving role and skills required of structural engineers in a digital environment • Challenges faced by engineering firms in adopting integrated digital workflows • Opportunities to improve productivity, collaboration and engineering decision-making	**Ir. Mun Yew Fai** **&** **Dr. Afonso Solak**
9:30am – 10:15am	**Open BIM Workflow for Structural Projects** • How BIM, automation and digitalisation are changing structural engineering practice • The evolving role and skills required of structural engineers in a digital environment • Challenges faced by engineering firms in adopting integrated digital workflows • Opportunities to improve productivity, collaboration and engineering decision-making	**Ir. Mun Yew Fai** **&** **Dr. Afonso Solak**
10:15am – 10:30am	**Morning Tea Break**	

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PROGRAMME

Time	Description	Speaker
10:30am – 11:15am	**Structural Design & Connection Engineering with BIM Environment** • Modelling and analysing structural systems in BIM environment • Integrating structural analysis and connection design to improve design consistency, optimisation and engineering decision-making • Improving design coordination and efficiency through an integrated BIM-based structural workflow	**Dr. Afonso Solak**
11:15am – 12:00pm	**Integrated MEP Design & Coordination: HVAC, Plumbing & Electrical** • Understanding how BIM is changing traditional MEP design and coordination workflows • Challenges faced by MEP engineers when multiple disciplines work within different design environments • Coordinating HVAC, plumbing, electrical and architectural models to identify spatial conflicts earlier	**Dr. Afonso Solak**
12:00pm – 12:30pm	**From BIM Model to Multidisciplinary Coordination** • Connecting engineering design models with BIM documentation and project deliverables • Using IFC-based models for multidisciplinary coordination and information exchange • Managing design changes while maintaining consistency between the structural model and BIM documentation	**Dr. Afonso Solak**
12:30pm – 1:00pm	**Q&A Session**	
1:00pm – 2:00pm	**Lunch**	
2:00pm – 3:15pm	**Integrated Foundation & Geotechnical Engineering in the Digital Design Lifecycle** • Connecting structural loads with foundation and geotechnical design considerations. • Evaluating foundation behaviour, soil–structure interaction, settlement, stability and groundwater conditions. • Supporting coordinated design review and engineering collaboration through connected digital information.	**Mr. Wan Muhammad Hafiz**
3:15pm – 3:30pm	**Afternoon Tea Break**	
3:30pm – 5:00pm	**From Digital Engineering to Intelligent Asset Operations** • Connecting digital models with real-time building and asset information. • Monitoring asset performance, energy usage and operational conditions through integrated dashboards. • Supporting smarter lifecycle decisions, operational efficiency and sustainability initiatives.	**Mr Lee Siak Hong**
5.00pm - 5.15pm	**Neuron Digital - Hertford System Partnership Signing Ceremony**	
5.15pm - 5.30pm	**Q&A / Closing**	

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SPEAKERS' PROFILE



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



Ir. Mun Yew Fai graduated from University Malaya in 2008 with a Bachelor of Civil Engineering and brings over 17 years of expertise in the construction industry. He is a registered ASEAN Chartered Professional Engineer (ACPE), Professional Engineer with BEM, Corporate Member of IEM, Associate Member of IFE Malaysia Branch, and Individual Member of MFPA. He currently serves as Secretary/Treasurer of the IEM Civil and Structural Engineering Technical Division (2025/26) and contributes to fire protection topics as a committee member of the IEM Fire Advisory Board. He is also active in MBAM's Technical and IBS committees and participates in working groups and technical committees drafting standards and guidelines with the Department of Standards Malaysia, CIDB, and other agencies. Mun Yew Fai began his career at T.Y. Lin International Sdn. Bhd., focusing on design and execution of mixed-use, residential, and commercial projects for over nine years. Since 2018, he has been with Hilti Malaysia, specializing in fastening technology. Promoted to Field Engineer Manager in 2022, he now serves as Codes and Approval Manager, collaborating with industry stakeholders to develop standards and specifications in fastening technology and passive fire protection.



Wan Muhammad Hafiz Wan Ab Rahman is currently working as a BIM Consultant at HERTFORD SYSTEM SDN BHD. His responsibilities include providing technical support and troubleshooting, delivering training sessions, supporting BIM adoption initiatives, and offering technical consultation services. Hafiz is focusing on Building Information Modelling (BIM) 3D modelling, Computer Aided Drafting (CAD) and engineering services with specialize in Bentley products such as MicroStation, PLAXIS 2D, OpenUtilities Substation, Promis.e and STAAD.Pro.

Hafiz gained valuable experience in the construction industry as Civil and Structural Engineer working at GHAZALI & ASSOCIATES SDN BHD before joining HERTFORD SYS-TEM SDN BHD. He was involved in various development and construction projects including residential, commercial, and industrial buildings which he mainly focuses on structural design and implementation of Building Information Modelling (BIM) for clash detection checking between architectural, structural and M&E discipline.

Hafiz holds a Bachelor of Civil Engineering with Honours from Universiti Kebangsaan Malaysia (UKM). Hafiz also further his skills on other solutions including AutoCAD, Revit, Navisworks, CYPELEC Electrical Mechanism, CYPELEC Distribution and CYPELEC Core.



LEE Siak Hong is the Head of Country Managers for ASEAN at Neuron Digital Group. Siak Hong brings a wealth of specialized experience in strategic business development and technical consulting, with a deep focus on AI-driven building management, proptech, green technology and construction project management sectors. Throughout his career, Siak Hong has a proven track record of bringing innovative enterprise software solutions to market and has been a driving force for digitalization among regional property developers and asset owners. His extensive background spans leading market expansion for advanced building management, project management software and enterprise software infrastructure.

Beyond proptech, Siak Hong has a strong passion for sustainability. His comprehensive understanding of local green building initiatives—such as Green Building Index (GBI) and LEED—and corporate ESG reporting requirements makes him perfectly positioned to champion Neuron's mission. In his role, Siak Hong also spearheads the expansion of Neuron's AI-powered Intelligent Building & Digital Twin platforms with smart IoT sensing network across Southeast Asia, forging strategic alliances with key channel partners and helping the ASEAN built environment achieve optimal energy, operational efficiency and its Net Zero targets.

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REGISTRATION FORM

No	Name (s)	M'Ship Number	IC No.	Fee (RM)
			SUB TOTAL	
			ADD SST @8%	
			TOTAL PAYABLE	

***Fees MUST be fully paid BEFORE the CLOSING DATE. Seats could only be confirmed upon payment. Enclosed herewith a crossed cheque No: _____for the sum of RM _____ issued in favour of "The Institution of Engineers, Malaysia" and crossed 'A/C payee only'. I/We understand that the fee is not refundable if I/We withdraw after my/our application is accepted by the Organising Committee as stated in the cancellation term. If I/We fail to attend the seminar, the paid registration fee will not be refunded.**

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