Organised by:

THE ASSOCIATION OF CONSULTING ENGINEERS MALAYSIA

TWO-DAY SEMINAR

Seismic Design in Malaysia to MS EN 1998-1:2015 and the National Annex (2017): From Seismic Hazard to Practical Design

7&8 December 2026 | **9.00 AM - 5.15 PM** | **Hotel Armada Petaling Jaya**

BEM APPROVED CPD: 13 HOURS

OVERVIEW

With the enactment of MS EN 1998-1:2015 and its Malaysian National Annex (2017), seismic design has moved from a specialist concern to a practical requirement for structural engineers in Malaysia. For many practitioners, however, the background to the code's parameters and how to apply them efficiently in routine design are still unclear. This two-day seminar explains the reasoning behind the Malaysian seismic provisions and shows engineers how to apply them confidently, correctly and economically.

The seminar starts with the background and development of the Malaysian seismic code. It then covers the derivation of the rock response spectrum, including why a reference value of 0.07g was adopted, and the soil response spectrum, including why the National Annex uses site natural period to account for local ground conditions. The second day covers structural engineering practice. It shows how seismic analysis can be carried out efficiently, highlights the common pitfalls practising engineers should look out for, and presents a seismic design approach suited to Malaysia's low-to-moderate seismicity, with indicative structural cost implications drawn from design case studies.

By the end of the seminar, participants will be able to:

- Explain the basis of the seismic design parameters in MS EN 1998-1 and the Malaysian National Annex;
- Construct the rock and soil response spectra for a given site, including determining the site period;
- Carry out and check seismic analysis, recognising common modelling and interpretation errors;
- Apply an appropriate seismic design and detailing strategy (if needed) for Malaysian buildings and estimate its likely effect on structural cost.



SPEAKER

Associate Professor
Dr. Daniel Looi Ting Wee

Head of School of Engineering, Faculty of Engineering and Technology, Sunway University

WHO SHOULD ATTEND

- Structural and civil engineers in consulting practice, from graduate to senior and principal level
- Professional Engineers (Ir) and Submitting Persons responsible for structural design and endorsement
- Geotechnical engineers involved in site investigation and site characterisation
- Engineers in government agencies and local authorities involved in design review and approval (e.g. JKR, local councils)
- Design-and-build contractors' engineers and checking engineers
- Engineers in property development and project management who need to understand the design and cost implications of seismic requirements
- Academics, researchers and postgraduate students in structural and earthquake engineering

Registration Fee *(inclusive of 8% SST)*

ACEM Member Firms	RM 972.00 per person
Others	RM 1,188.00 per person

(E-certificate of attendance will be issued, subject to full attendance)

For further enquiries, please contact the ACEM secretariat at 012 5290031 or e-mail vivien@acem.com.my.

Please click link *https://kliksini.my/6XVGP* or scan QR code for ONLINE REGISTRATION.

(Closing date: 1 December 2026)

Please await final confirmation from the ACEM secretariat before making any flight or hotel reservations.

SPEAKER'S BIODATA

Dr Daniel Looi is an academic and structural engineer, with design and engineering experience in Malaysia and Hong Kong. He is a Chartered Professional Engineer (CPEng, Structural) with Engineers Australia and currently serves as Associate Professor and Head of the School of Engineering at Sunway University. He holds a Bachelor of Engineering (Hons) in Civil Engineering from the University of Malaya (2006) and a PhD in Structural Engineering from the University of Hong Kong (2017). His doctoral research was on the seismic performance of reinforced concrete transfer structures, a system widely used in high-rise buildings in Malaysia and Hong Kong.

Dr Looi's work sits where structural design practice and seismic engineering meet. He was one of the major hands-on contributors to the Malaysian National Annex to MS EN 1998-1 (Seismic actions for buildings), helping turn seismic hazard studies into design provisions that Malaysian engineers can apply in everyday practice. He also contributed to the Malaysian national code for EC1-1-6 (Actions during execution) and chairs the Department of Standards Malaysia Working Group for MS EN 1992-4 (Design of fastenings for use in concrete).

He works closely with industry on practical structural problems, including precast and modular construction, post-installed reinforcement and fastening design, through collaborations with partners in Hong Kong, China and Australia. He serves on the IEM Civil and Structural Engineering Technical Committee and is regularly invited by the media to comment on earthquake readiness in Malaysia.

PROGRAMME SCHEDULE

Day 1 – Seismic Hazard and Design Actions

8.30 a.m.	Registration
9.00 a.m.	Welcome address and introduction
9.15 a.m.	Background of the Malaysian seismic design codes – MS EN 1998-1:2015 and National Annex (2017)
10.30 a.m.	*Morning tea break*
10.45 a.m.	Rock response spectrum for Malaysia – why 0.07g?
12.30 p.m.	*Lunch*
1.30 p.m.	Soil response spectrum for Malaysia – why site period? (Session 1)
3.15 p.m.	*Afternoon tea break*
3.30 p.m.	Soil response spectrum for Malaysia – why site period? (Session 2)
4.45 p.m.	Q&A and discussion
5.15 p.m.	End of Day 1

Day 2 – Seismic Analysis and Design in Practice

8.30 a.m.	Registration
9.00 a.m.	Seismic analysis made easy for practising engineers – what to look out for? (Session 1)
10.30 a.m.	*Morning tea break*
10.45 a.m.	Seismic analysis made easy for practising engineers – what to look out for? (Session 2)
12.30 p.m.	*Lunch*
1.30 p.m.	Seismic design suitable for Malaysian engineers – what is the concept and approximate structural cost? (Session 1)
3.15 p.m.	*Afternoon tea break*
3.30 p.m.	Seismic design suitable for Malaysian engineers – what is the concept and approximate structural cost? (Session 2)
4.45 p.m.	Q&A, discussion and closing
5.15 p.m.	End of Seminar