

## **2-DAY SYMPOSIUM ON “EARTHQUAKE RESISTANT DESIGN OF RC BUILDINGS BASED ON THE EC8 MALAYSIA NA: FROM LOADING CHARACTERISATION TO RC DETAILING”**

### **SPEAKERS:**

**Prof. John WILSON** (Swinburne University of Technology, Sarawak)  
**Prof. Nelson LAM** (University of Melbourne, Australia)  
**Dr. Hing-Ho TSANG** (Swinburne University of Technology, Australia)  
**Dr. Daniel LOOI** (Swinburne University of Technology, Sarawak)  
**Ir. Lim Ek Peng** (Hashim & Neh Consultants, Malaysia)

**Date** : 01 – 02 July 2019 (Monday & Tuesday)  
**Venue** : Swinburne University of Technology Sarawak Campus  
Kuching, Sarawak.  
**Time** : 9.00 a.m. – 5.30 p.m.

**BEM Approved CPD/PDP Hours: 12  
(IEM19/SWAK/229/S)**

**Closing Date: 26 June 2019, Wednesday**

**NO registration will be allowed after the Closing Date**

**Organized & Hosted by:**

**IEM Sarawak Branch and Swinburne University of Technology, Sarawak**

#### **Cancellation Policy**

No cancellation will be accepted prior to the date of the event. However, replacement or substitute may be made at any time with 7 days prior notification and substitute will be charged according to membership status.

#### **Personal Data Protection Act**

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## SYNOPSIS

Malaysia has adopted Eurocode 8 (EC8) for the seismic design of building structures. The research on seismic actions and analysis methods suitable for low-to-moderate seismicity region were carried out for around a decade by the study group established under WG1 for the Malaysia National Annex of EC8.

Many of the speakers for this seminar are among the main contributors in the study group. Followed by the published NA, in this seminar, the speakers will share the insights of the NA and will provide guidance for best practice earthquake design suitable for Malaysia.

The topics include the backgrounds of seismic actions modelling for Malaysia stipulated in the NA, the selection of response spectrum to input into structural analysis package for seismic demand, general seismic design consideration, workflow of structural analysis of a building subject to seismic actions and simplified deemed-to-comply seismic detailing for frame building structures fulfilling DCM requirement in EC8.

An example of RC frame building modelling and design in Malaysia, will be demonstrated by a practicing engineer among the speakers. The speakers are motivated to continue with the development of simplified DCM seismic detailing solution fulfilling EC8 for shear wall building structures in the sequel of this seminar in the future.

## SPEAKERS



**Professor John Wilson** exemplifies Swinburne's emphasis on teaching and research with real-world application. Professor Wilson's experience combines a substantial academic career with more than a decade in industry as a consulting engineer. Prior to being appointed Deputy Vice Chancellor and Chief Executive Officer of Swinburne Sarawak, Professor Wilson was Pro Vice-Chancellor (Academic Strategy Implementation), and Executive Dean for the Faculty of Science, Engineering and Technology.

He is an expert in structural systems, earthquake engineering, structural dynamics and sustainable structures and has consulted widely in these fields.

Professor Wilson holds a Bachelor of Engineering from Monash University in 1980, a Master of Science from the University of California (Berkeley) in 1984 and a PhD from the University of Melbourne in 2000. He is the past joint recipient of four Chapman Medals and one Warren Medal. He was the Victorian Division Chairman of Engineers Australia in 2002, spokesperson for the Victorian Infrastructure Report Cards since 2005, Chairman of Judges for the Victorian Engineering Excellence Awards since 2011, Chairman of BD6/11, the committee responsible for the earthquake-loading standard for Australia and a member of ACI307 Committee.



**Nelson Lam** is Professor and leader of the Structures and Buildings Discipline in Department of Infrastructure Engineering at The University of Melbourne. He has 36 years of experience in structural engineering, and has been working in the specialized field of earthquake engineering, impact dynamics and structural dynamics in the past 29 years.

He is member of the Seismic and Dynamic Events Panel commissioned by the London Headquarter of The Institution of Structural Engineers and also member of the standing committee for future revisions to the Australian standard for seismic actions. His achievement in research in this field was recognized by the award of the Chapman

Medal (1999) and Warren Medal (2006) by Engineers Australia; and Chapman Medal for the second time in 2010. He is also recipient of Award for Teaching Excellence given out by Engineers Australia in 2012 and Academic Staff Teaching Award by Melbourne School of Engineering in 2013. He is lead author of the professional guidebook titled Design of Buildings and Structures in Low to Moderate Seismicity Regions which was launched in June this year. The book can be accessed free online using this link: <https://www.polyu.edu.hk/cnrc-steel/publications.html>.

Nelson's early career as a structural engineer was with Scott Wilson International throughout the 1980's and attained British chartered engineer status during that period. He was awarded the degree of BSc in civil engineering with first class honours at the University of Leeds, England in 1981, MSc degree in concrete structures at Imperial College of Science & Technology, London in 1982 and PhD in earthquake engineering at The University of Melbourne in 1993.

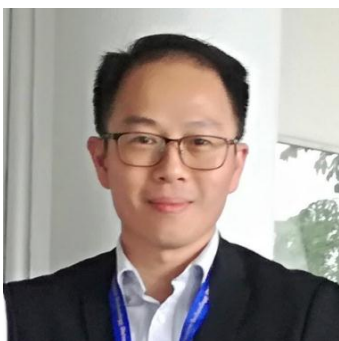


**Dr. Hing-Ho Tsang** is currently a Senior Lecturer at Swinburne University of Technology, Australia. He lectured at the University of Hong Kong from 2007 to 2012, and was a Visiting Professor at Karlsruhe Institute of Technology, Germany, in 2013 and 2016.

He served as an Advisor and co-developed a seismic design guideline for the Hong Kong Housing Authority, and was consulted on the seismic analysis of the 39-km Hong Kong-Zhuhai-Macao Bridge. He has authored or co-authored over 160 research articles. His research achievement has won him four international awards and three

university prizes.

Dr. Hing-Ho Tsang obtained his Bachelor of Engineering (Hons.) (Civil) from University of Hong Kong in 2002 and PhD (Structural Engineering) from the same university in 2006.



**Dr. Daniel Looi** is a Lecturer at Swinburne University of Technology (Sarawak campus), Malaysia. He specialises in the field of earthquake engineering, with particular interest in the seismic behaviour of reinforced concrete structures in low-to-moderate seismicity region. He is a key contributor to the development of the National Annex to Eurocode 8 on the seismic design of building structures for Malaysia. His research in concrete structures was recognised by the HKIE Outstanding Paper Award for Young Researcher/Engineer (2015).

He is a frequent speaker and co-speaker in IEM seminars, authored and co-authored seismic related research articles in IEM Jurutera Bulletin and international journal since 2011. Daniel worked as a structural application engineer in a multi-national company, specialised in structural analysis and design computation for buildings and plant. He was trained by the late Ir. MC Hee in his early career as a structural engineer. He is an

alumnus of the Civil Engineering Department, University of Hong Kong (PhD in Earthquake and Structural Engineering awarded in 2017) and University of Malaya (BEng in Civil graduated in 2006).



**Ir. EP. Lim** is a practising Professional Civil & Structural Engineer with Perunding Hashim & NEH Sdn. Bhd. He has over 32 years of experience in civil & structural engineering design and construction. He was a member of technical committees of (IEM-SWO) for standards in Design of Concrete Structures for MS EN 1990, 1991, 1992 & was a member of IEM C&S WG1 for drafting of Malaysia National Annex of EC8.

Ir. EP Lim was awarded Bachelor of Civil Engineering with Honours First Class from University of Technology Malaysia in 1985 and Master of Engineering from University of Malaya in 1989.

## PROGRAMME

DAY 1	01 July 2019	
TIME	PROGRAMME	
0830 – 0900	<b>Registration of Participants for Day 1</b> Morning Refreshment	
0900 – 0915	Welcoming Address by Chairman IEM Sarawak Branch	
0915 – 1015	<b>Distinguished opening lecture</b>	Prof. John Wilson
1015 – 1045	<i>Morning Tea Break</i>	
1045 – 1145	<b>Session 1:</b> Design Seismic Actions Stipulated by the Malaysia NA	Prof. Nelson Lam
1145 – 1200	Q&A Session 1	
1200 – 1300	<b>Session 2:</b> Site Classification and Design Response Spectrum Stipulated by the Malaysia NA	Dr. Hing-Ho Tsang
1300 – 1400	<i>Break For Lunch</i>	
1400 – 1415	Q&A Session 2	
1415 - 1515	<b>Session 3:</b> General Design Considerations: Objectives, Methodology And Procedures	Prof. Nelson Lam
1515 – 1530	Q&A Session 3	

1530 – 1600	Afternoon Tea Break	
1600 – 1645	<b>Session 4:</b> Workflow For Structural Analysis of a RC Building Subject to Design Seismic Actions	Dr. Daniel Looi
1645 – 1700	Q&A Session 4	
1700	End of Day-1 Symposium	

**\* IEM reserves the right to postpone, reschedule, allocate or cancel the course**

<b>DAY 2</b>	<b>02 July 2019</b>	
<b>TIME</b>	<b>PROGRAMME</b>	
0830 – 0900	<b>Registration of Participants for 2<sup>nd</sup> Day</b> Morning Refreshment	
0900 – 1000	<b>Session 5:</b> Tools to Check Dynamics Results Generated from Computer Packages: The Generalised Force Method (GFM)	Prof. Nelson Lam
1000 – 1015	Q&A Session 5	
1015 – 1045	Break For Morning Refreshment	
1045 – 1145	<b>Session 6:</b> EC8 RC Frame Design and Detailing: With A Deemed-To-Comply DCM Solution	Dr. Daniel Looi
1145 – 1200	Q&A Session 6	
1200 – 1300	<b>Session 7a:</b> Example of Applying EC8 and The Malaysia NA	Ir. EP Lim
1300 – 1400	Break For Lunch	
1400 – 1500	<b>Session 7b:</b> Example of Applying EC8 and The Malaysia NA (continued)	Ir. EP Lim
1500 - 1530	Q&A Session 7	
1530 – 1600	Break for Afternoon Refreshment	
1600 – 1630	Summary and Closing Remarks	Prof. Nelson Lam / Dr. Hing-Ho Tsang
1630 – 1700	Q&A Overall	
1700	End of Symposium	

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## REGISTRATION FORMS



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Date : 01 – 02 July 2019 (Monday & Tuesday)

Venue : Swinburne University of Technology Sarawak Campus Kuching, Sarawak.

Time : 9.00 a.m. – 5.30 p.m.

Registration Fee	
	FEE (RM)
IEM Student Members	200.00
IEM Graduate Members	500.00
IEM Corporate Members	700.00
Non-IEM Members	900.00

**BEM Approved CPD/PDP Hours: 12  
(IEM19/SWAK/229/S)**

**Closing Date for Registration & Payment: 26 June 2019, Wednesday (not later than 12:00noon)**

To: Secretariat  
The Institution of Engineers Malaysia (Sarawak Branch)  
No. 16, Jalan Bukit Mata Kuching, 93100 Kuching  
Tel: (082) 428 506 Facsimile: (082) 243 718  
E-mail: [iemsarawak@gmail.com](mailto:iemsarawak@gmail.com) Website: [www.iemsarawak.org](http://www.iemsarawak.org)

**For the purpose of BEM-approved CPD/PDP hours, all IEM Members must provide their registration number.**

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Total (RM)				

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Account No. : **420-1-5651-8528**

(Kindly fax us your payment slip for direct bank-in and quote our reference when making payment)

I/We understand that the fee is not refundable for no-show/cancellation after my/our registration (is) is/are accepted but substitution of participant(s) will be allowed. The Organizer reserves the right to cancel, alter or change the programme due to unforeseen circumstances. Every effort will be made to inform the registered participants of any changes. Two (2) Tea breaks and One (1) Lunch will be served

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