

2-DAY SYMPOSIUM ON "EARTHQUAKE RESISTANT DESIGN OF RC BUILDINGS BASED ON THE EC8 MALAYSIA NA : FROM LOADING CHARACTERISATION

TO RC DETAILING"

SPEAKERS:

Prof. Nelson Lam (University of Melbourne, Australia) Dr. Hing-Ho Tsang (Swinburne University of Technology, Melbourne, Australia) Dr. Daniel Looi Ting Wee (Swinburne University of Technology, Sarawak, Malaysia) Ir. Lim Ek Peng (Perunding Hashim & NEH Sdn Bhd)

Ir. Dr. Ng Soon Ching (Sepakat Setia Perunding Sdn Bhd)

Date Venue 18TH – 19TH DECEMBER 2018 (Tuesday & Wednesday)
Crystal Crown Hall, Level 1 CRYSTAL CROWN HOTEL, Petaling Jaya, Selangor

Time

BEM Approved CPD/PDP Hours: 11.5 (IEM18/HQ/448/S)

Closing Date: 15TH DECEMBER 2018

NO online registration will be allowed after the Closing Date

: 9.00 a.m. – 5.30 p.m.

Organized & Hosted by:

Civil & Structural Engineering Technical Division, IEM

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SYNOPSIS

Malaysia has adopted Eurocode 8 (EC8) for the seismic design of building structures. Research into seismic actions and analysis methods suitable for low-to-moderate seismicity regions have been carried out for around a decade by the study group which was established under WG1 for the Malaysia National Annex (NA) of EC8.

Many of the speakers for this seminar are amongst the main contributors to the study group. Followed by the publication of the NA, the speakers will make use of this seminar to share insights of the NA and to provide guidance for best practices in the earthquake resistant design of structures for Malaysia.

The presented topics include background of seismic actions modelling for Malaysia as stipulated in the NA, the selection of response spectrum for input into a structural analysis package for calculation of the seismic demand, general seismic design considerations, workflow of structural analysis of a building subject to seismic actions and simplified deemed-to-comply seismic detailing for building frames fulfilling DCM requirements in EC8.

A half-day workshop based on an example RC frame building illustrating computer modelling and structural design techniques will be demonstrated by a few experienced practicing engineers who are amongst the speakers. The speakers of this seminar are motivated to continue with the development of a simplified DCM seismic design and detailing solution fulfilling EC8 for shear wall building structures in the future sequel of this seminar series.

SPEAKERS



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/cnerc-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. 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 and University of Malaya.



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. Dr. Ng Soon Ching is the Engineering Manager at Sepakat Setia Perunding Sdn Bhd. Prior to this, he was an Assistant Professor at Universiti Tunku Abdul Rahman (UTAR). He is an active member of IEM and serves as the Council Member as well as Advisor to the Civil and Structural Engineering Technical Division of IEM. He also serves as committee member in Earthquake Technical Committee of SIRIM. He has the opportunity to work under the late Ir. MC Hee in the conceptual design of a 58-storey highrise building in Kuala Lumpur.

PROGRAMME

| DAY 1 | 18 th September 2018 | |
|--------------------------|--|----------------------|
| TIME | PROGRAMME | |
| 0830 – 0900 | <i>Registration of Participants for Day 1</i> Welcome Refreshment | |
| 0900 – 0915 | Welcome Address by Ir. Chong Chee Meng, Chairman, Civil and Structural Engineering Technical Division (CSETD), IEM | |
| 0915 – 0930 | Devote Time for Remembering the Late Adjunct Prof. M.C. Hee (1 Minutes of SILENCE) | |
| 0930 – 1030 | Session 1: Design Seismic Actions Stipulated by the Malaysia NA | Prof. Nelson Lam |
| 1030 – 1100 | Morning Tea Break | |
| 1100 - 1115 | Q&A Session 1 | |
| 1115 – 1215 | Session 2: Site Classification and Design Response Spectrum Stipulated by the Malaysia NA | Dr. Hing-Ho Tsang |
| 1215 – 1230 | Q&A Session 2 | |
| 1230 - 1400 | Break for Lunch | |
| 1400 – 1500 | Session 3: General Design Considerations: Objectives, Methodology and Procedures | Prof. Nelson Lam |
| 1500 – 1515 | Q&A Session 3 | |
| <mark>1515 – 1545</mark> | Afternoon Tea Break | |
| 1545 – 1645 | Session 4: Workflow for Structural Analysis of a RC Building Subject to Design Seismic Actions | Dr. Daniel Looi |
| 1646 - 1700 | Q & A Session 4 | |
| 1700 | End of Day-1 Symposium | |

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

PROGRAMME

| DAY 2 | 19 th September 2018 | |
|-------------|---|--|
| TIME | PROGRAMME | |
| 0830 – 0900 | <i>Registration of Participants for 2nd Day</i> Welcome Refreshment | |
| 0900 – 1000 | Session 5: 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 | Morning Tea Break | |
| 1045 – 1145 | Session 6: EC8 RC Design and Detailing: With A Deemed-To- Comply DCM Solution | Dr. Daniel Looi |
| 1130 – 1145 | Q&A Session 6 | |
| 1145 – 1215 | Workshop Part 1: Example of Applying EC8 and the Malaysia NA - Modelling and Design of a RC Frame Building under DCL | Ir. EP Lim and Ir. Dr. SC Ng |
| 1215 – 1230 | Q&A Workshop Part 1 | |
| 1230 – 1400 | Break for Lunch | |
| 1400 – 1530 | Workshop Part 2: Example of Applying EC8 and the Malaysia NA - Modelling and Design of a RC Frame Building under DCM | Ir. EP Lim and Ir. Dr. SC Ng |
| 1530 – 1600 | Afternoon Tea Break | |
| 1600 – 1630 | Summary and Closing Remarks | Prof. Nelson Lam / Dr. Hing-Ho Tsang |
| 1630 - 1700 | Q&A Workshop Part 2 and Overall | |
| 1700 | End of Symposium | |

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REGISTRATION FORMS

| 2-DAY SYMPOSIUM ON "EARTHQUAKE RESISTANT DESIGN OF RC BUILDINGS BASED ON THE EC8 MALAYSIA NA : FROM LOADING CHARACTERISATION TO RC DETAILING" <u>18th – 19th DECEMBER 2018</u> | | | | | | |
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• The Organizing Committee reserves the right to cancel, alter, or change the program due to unforeseen circumstances. Every effort will be made to inform the registered participants of any changes. In view of the limited places available, intending participants are advised to send their registrations as early as possible so as to avoid disappointment.

For further details, kindly contact:

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"EARTHQUAKE RESISTANT DESIGN OF RC BUILDINGS BASED ON THE EC8 MALAYSIA NA : FROM LOADING CHARACTERISATION TO RC DETAILING" 18th – 19th DECEMBER 2018 (Tue - Wed)

Organised by :

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Ir. Chong Chee Meng,

Chairman, Civil & Structural Engineering Technical Division (CSETD)

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