

REGISTRATION FORM

2-DAY WORKSHOP ON
 "PROPOSED SEISMIC ANALYSIS METHODS FOR REGIONS OF LOW TO MEDIUM SEISMICITY"
 10th April 2017 – 11th April 2017
 Fax: 03-7957 7678 Email: shahrul@iem.org.my



Registration Fee (SUBJECT TO 6% GST)		
	ONLINE (RM)	NORMAL (RM)
IEM Student Members	80.00	100.00
IEM Graduate Members	350.00	400.00
IEM Corporate Members	400.00	450.00
Non-IEM Members (BEM Registered Engineer)	600.00	700.00
Non-IEM Members (None of the Above)	700.00	800.00

*GST is implemented effective from 1st April 2015

2-Day Workshop On Proposed Seismic Analysis Methods for Regions of Low to Medium Seismicity

No	Name(s)	Membership No.	Grade	Fee (RM)*
SUB TOTAL				
ADD 6% GST				
<i>Total Payable</i>				

PAYMENT DETAILS:
 Cash RM _____

 Cheque no. _____ for the amount of RM _____ (non refundable) and made payable to "THE INSTITUTION OF ENGINEERS, MALAYSIA" and crossed 'A/C Payee Only'.

FULL PAYMENT must be settled before commencement of the seminar, otherwise participants will not be allowed to enter the hall. If a place is reserved and the intended participant fails to attend the course, the fee is to be settled in full. If the participant failed to attend the course, the fee paid is non refundable. Registration fee includes lecture notes, refreshment and lunch.

For **ONLINE REGISTRATIONS**, please note that payment **MUST** be made **BEFORE** the closing date. If payment is not received within the stipulated time, the registration fee will be reverted to the normal registration fee.

Contact Person: _____ Designation: _____

Name of Organization: _____

Address: _____

Telephone No.: _____ (O) _____ (Fax)

_____ (H) _____ (HP)

Email: _____

Signature & Stamp

Date

For further details, kindly contact:

 The Institution of Engineers, Malaysia
 Bangunan Ingenieur, Lots 60/62, Jalan 52/4, P.O. Box 223 (Jalan Sultan) 46720 Petaling Jaya.
 Tel : 603-7968 4001/2 Fax : 603-7957 7678 Email : shahrul@iem.org.my
SPEAKERS;

Prof. Dr. Azlan bin Adnan (Universiti Teknologi Malaysia)
 Prof. Robert Geller (University of Tokyo, Japan: will retire in March 2017)
 Ir. Adj. Specialist MC Hee (MC Hee & Associates, Malaysia)
 Prof. Nelson Lam (University of Melbourne, Australia)
 Ir. Lim Ek Peng (Perunding Hashim & Neh Sdn Bhd, Malaysia)
 Prof. Kyriazis Pitilakis (Aristotle University of Thessaloniki, Greece)
 Dr. Hing-Ho Tsang (Swinburne University, Australia)

Date : 10th April 2017 – 11th April 2017
 (Monday & Tuesday)
Venue : Ballroom, Armada Hotel, Petaling Jaya, Selangor
Time : 9.00 a.m. – 5.30 p.m.

BEM Approved CPD/PDP Hours: 12 Ref No: IEM17/HQ/091/C

Closing Date: 6 April 2017, Thursday
NO online registration will be allowed after the closing date

Organized & Hosted by:
Civil and Structural Engineering Technical Division, IEM

DAY 1 – 10 APRIL 2017 (Chairman of Session: Ir. Mun Kwai Peng)

8.30am – 9.00am **Registration of Participants**
 9.00am – 9.10am Welcoming Remarks by Chairman of IEM Civil & Structural Engineering Tech Div., Ir. Dr. Ng Soo Ching
 9.10am – 9.15am Commencement of Proceedings by Chairman of Session, Ir. Mun Kwai Peng
 9.15am – 9.45am Presentation by Prof. Nelson Lam – **Eurocode 8 and the National Annex for Malaysia: An Overview**
 9.45am – 10.45am Invited lecture by Prof. Kyriazis Pitiaklis – **EC8 Part 1 Seismic Actions: Present Situation and Ongoing Revision**
 10.45am – 11.15am **Break for Morning Refreshment**
 11.15am – 12.15pm Presentation by Dr. Hing-Ho Tsang – **Response Spectrum Models in the Draft NA to Eurocode 8**
 12.15pm – 1.30pm **Break for Lunch**
 1.30pm – 2.30pm Presentation by Prof. Nelson Lam – **Seismic Analysis Methods**
 2.30pm – 3.30pm A case study presentation by Ir. EP Lim – **A Worked Example of a 9-storey RC residential building using Modal Response Spectrum Analysis**
 3.30pm – 4.00pm **Break for Afternoon Refreshment**
 4.00pm – 4.30pm Presentation by Ir. Adj. Specialist MC Hee & Prof. Nelson Lam – **Reporting Issues of Contention in the Draft NA to Eurocode 8**
 4.30pm – 5.00pm **Discussion and Feedback from Participants**

DAY 2 – 11 APRIL 2017 (Chairman of Session: Ir. Prof. Dr. Jeffrey Chiang)

8.30am – 8.55am **Registration of Participants**
 8.55am – 9.00am Commencement of Proceedings by Chairman of Session, Ir. Prof. Dr. Jeffrey Chiang
 9.00am – 9.30am Presentation by Ir. Adj. Specialist MC Hee & Prof. Nelson Lam – **Introduction to Seismic Zonation Issues and Setting the Scene**
 9.30am – 10.30am Invited lecture by Prof. Robert Geller – **Living in a Post-PSHA World**
 10.30am – 11.00am **Break for Morning Refreshment**
 11.00am – 11.30am Continuing lecture by Prof. Robert Geller – **Living in a Post-PSHA World**
 11.30am – 12.15pm Presentation by Prof. Nelson Lam – **Seismic Hazard Analysis Approach Adopted in NA to Eurocode 8**
 12.15pm – 1.30pm **Break for Lunch**
 1.30pm – 2.30pm Presentation by Prof. Azlan Adnan – **Probabilistic Seismic Hazard Assessment of Malaysia for the Malaysia National Annex MS EN1998: Part 1**
 2.30pm – 3.30pm Presentation by Prof. Nelson Lam – **Minimum Seismic Loading Requirements**
 3.30pm – 4.00pm **Break for Afternoon Refreshment**
 4.00pm – 5.00pm **Open Discussion / Dialogue on Zonation with Panel Speakers and Participants**
 5.00pm – 5.15pm **Summary and Closing**

ABOUT THE SPEAKERS AND SYNOPSIS OF THEIR PRESENTATIONS**Professor Dr. Azlan Adnan**

DR. AZLAN BIN ADNAN is a Professor of Structural Earthquake Engineering at the Structural and Material Department, Faculty of Civil Engineering, Universiti Teknologi Malaysia (UTM). He is the Head for research group, "Engineering Seismology and Earthquake Engineering Research" or e-SEER. He was born in Kuala Lumpur and had a high school education from Victoria Institution, Kuala Lumpur. He pursued his B.Sc in Civil Engineering at California State University, Long Beach and his M.Sc in Structural Engineering at UTM. His Ph.D. degree was obtained through a joint program between UTM and Illinois Institute of Technology, Chicago, USA. Before joining UTM in 1989, Dr. Azlan Adnan had been working with several organizations in the government and private sectors for more than three years. He is a member of several international associations such as the Earthquake Engineering Research Institute (EERI) of United States and the Seismological Society of America (SSA). Currently, he is serving as the Vice President of Malaysian Structural Steel Association (MSSA). Beside publishing more than 200 technical and academic papers, he is also the earthquake engineering consultant for several mega projects in Malaysia such as the Pan-Borneo Sarawak Highway Project, the National Power Berhad (TNB) Thermal and Hydro Power Plant Seismic Hazard Assessment, the new expansion project of Penang bridge, the Second Penang Bridge, the KLIA1 and KLIA2 ATC towers, the new iron ore processing plant in Teluk Rubiah, Perak, the Bum-Bum Island-Semporna Bridge and Tawau Dam in Sabah and the Bakun Dam, Sarawak. Being the active committee members of IEM Seismic Design Code Committee of Malaysia and MOSTI Inter-Agency Committee on Earthquake and Tsunami.

SYNOPSIS OF HIS PRESENTATION: Seismic hazard in Malaysia is associated with seismicity originating from seismically active neighbouring countries such as Indonesia and Philippines. Being situated on the stable Sunda plate, most people perceive that Malaysia is free from the life threatening seismic crisis. The Malaysian Network of Seismological Stations have been recording distant ground motions from the two most active plate tectonic margins in the world, which are the 1650 km long Sumatran fault and the Philippines plate. In addition, several earthquakes due to local faults with the maximum moment magnitude of 4.4 have also been observed within Peninsular Malaysia since 2007. Even though the local earthquakes were small, the epicenters were as close as 20 km to Kuala Lumpur, which a slight higher value of magnitude could have remarkable effects on seismic hazard of the region. The largest earthquake occurred on 5th June 2015 at a depth of approximately 10km, with its epicentre approximately 15km north of Ranau, Sabah. The fact that the earthquakes have not yet inflicted any serious damage or collapse of buildings, historically, it should not be taken as an excuse for not considering the effects of earthquakes on the existing and future structures. Current design code for building structures in Malaysia widely adopts the British Standard (BS) 8110 code (BS 8110-1:1997) which has no provisions for earthquake-induced forces. In the interest of public safety, it is reasonable to comprehensively assess the seismic hazard and design of the region. Thus, the objectives of the project are as follow: (1) provide Peak Ground Acceleration (PGA) values to all regions in Malaysia for Malaysia National Annex of EC8 (NA-MS EN1998), (2) develop seismic zoning maps for Malaysia so that zones with non-seismic regions can be identified and zones with no special steel reinforcement-detailing requirement can be specified, and (3) develop elastic and design response spectra. In EC8, zone 0 is specified for ground accelerations of 0.0g to 0.04g and 0.04g to 0.08g for seismic zone 1. It can be concluded that about 90% of Peninsular and Sarawak fall into zone 0 and 1, without any special requirement for steel detailing, and generally about 40% of the regions is not required to design for seismic. In comparison among the 3 regions, the ratio of zone 0, zone 1 and zone 2 and higher, are as follows: Peninsular (45:45:10), Sabah (30:40:30), and Sarawak (70:20:10). The highest Peak Ground Acceleration (PGA) values covering sizeable regional areas of Peninsular, Sabah and Sarawak are 1.6%, 16.5%, and 15%, respectively. The horizontal elastic and design acceleration response spectra (RSA) on bedrock for the Peninsular, Sabah and Sarawak regions were produced using the principles of EC8 and derived based on the computed uniform hazard spectra with 10% probability of exceedence in 50 years for several sites of the regions using probabilistic approach of seismic hazard assessment.

Professor Robert Geller

ROBERT GELLER received his education in geophysics at the California Institute of Technology (BS 1973; MS 1975; PhD 1977). After six years as Assistant Professor at Stanford University he became the first tenured non-Japanese faculty member at the University of Tokyo in 1984. He will retire in March 2017 at the statutory age of 65. He has focused mainly on basic research in seismology (earthquake sources, numerical modeling of seismic wave propagation, inferring the Earth's 3-D seismic velocity structure, mechanisms of tsunami excitation, etc.). A secondary research interest has been critical evaluation of research on earthquake prediction; he has published in *Nature*, *Science*, etc., on this topic. Since the 2011 Tohoku earthquake he has also studied earthquake safety issues involving the intersection of seismology and public policy.

SYNOPSIS OF HIS PRESENTATION: Probabilistic Seismic Hazard Analysis (PSHA) has been used for about 50 years but its scientific validity has never been established. In a [paper](#) in *Physics of the Earth and Planetary Interiors* in 2016 Geller and colleagues argued that, for the following reasons, PSHA should be abandoned. (1) PSHA's basic assumptions contradict what is known about the physics of earthquakes. (2) PSHA fundamentally misuses the concept of "probability." (3) PSHA does not work; its hazard forecasts do not agree with subsequent seismicity. A new way forward must be sought. All participants in the process of choosing earthquake design criteria—including project developers, owners, risk managers, engineers, and architects—must "take ownership" of the inherent uncertainties of earthquake hazards, rather than relying on PSHA as a black box.

Ir. Adjunct Specialist MC Hee

MC HEE is a practicing Structural Consulting Engineer and Principal of M C Hee & Associates. His expertise is in the design and construction of high-rise buildings particularly in value engineering and alternative design. His philosophy is "design for simplicity and buildability" with a "total concept approach". He has over 40 years' of experience in this field. He was a Vice President of IEM and an active member of Technical Committee drafting the Malaysian National Annex of EC8. He is Adjunct Specialist in Civil Engineering at the Department of Civil Engineering, UTAR.

SYNOPSIS OF HIS PRESENTATION: 2 Joint presentations with Prof. Nelson Lam (1) public comments on main issues received of Draft National Annex to Eurocode 8 and (2) Discussion on Seismic Zonation Issues

Professor Nelson Lam

NELSON LAM, who is professor in civil engineering at The University of Melbourne, has 35 years of experience in structural engineering. In the past 27 years, he has been working in the specialized field of impact dynamics, structural dynamics and earthquake engineering; is member of the standing committee for future revisions to the Australian standard for seismic actions; principal international advisor to the drafting of the National Annex to Eurocode 8 on the seismic design of building structures for Malaysia, and member of the Seismic and Dynamic Events Panel commissioned by the London Headquarter of The Institution of Structural Engineers. Many of his international journal publications have been frequently referred to in the seismic code development for Australia and many countries in Asia. His achievement in research in this field was recognized by the award of the Chapman Medal (1999) and Warren Medal (2006) by Engineers Australia; the Best Paper Award (2004-2007) by the ISET Journal of Earthquake Technology.

SYNOPSIS OF HIS PRESENTATION: In his first main presentation he will introduce various types of seismic analysis methods that can be used in determining the effects of seismic actions on building structures of different height ranges. In his later presentations he will present the basic seismic hazard analysis approach that can be adopted, the basis of the adopted approach and details of the results of analyses for the different states within the country. More time will be devoted to presenting the results for Sabah. One of his presentations will be devoted to explaining on how the minimum seismic loading requirements for the Peninsular and Sarawak were derived from the global survey of seismic activities data along with limited local information.

Ir. Lim Ek Peng

EP LIM is a practicing Civil and Structural Engineer with Perunding Hashim & NEH Sdn Bhd. He has over 30 years of experience in civil and structural engineering design and construction. He is a member of IEM C&S WG1 for drafting the Malaysian National Annex of EC8.

SYNOPSIS OF HIS PRESENTATION: His presentation is about a step-by-step procedure for dynamic analysis via the modal response spectrum analysis using computer software. The analysis is carried out on a three dimensional 9-storey residential building. Key design procedures highlighted using the Ductility Class Low DCL.

Professor Kyriazis Pitiaklis

KYRIAZIS PITILAKIS graduated from Aristotle University of Thessaloniki, Greece, and took his PhD in Ecole Centrale de Paris. He has more than thirty years of intensive academic, research and professional experience in civil, earthquake and geotechnical engineering. He has been Chairman and now Vice Chairman of the Technical Committee "Geotechnical Earthquake Engineering and Associated Problems" (IC203) of the International Society of Soil Mechanics and Geotechnical Engineering (ISSMGE), past President and presently Vice President of the Greek Society of Earthquake Engineering and Vice President of the European Association of Earthquake Engineering (EAE). He is Director of the Laboratory of Soil Mechanics, Foundations and Geotechnical Earthquake Engineering of the Civil Engineering Department of AUTH (2015-) (<http://sdgee.civil.auth.gr>). He has been Head of the Civil Engineering Department of Aristotle University (1997-2001) and Chairman of the Institute of Earthquake Engineering and Engineering Seismology in Greece (IISAK).

SYNOPSIS OF HIS PRESENTATION: The lecture will present a comprehensive synthesis of the recent publications and current work of K. Pitiaklis and his co-workers (i.e. in 2012, 2013 published in BEE, in 2016 published in SOILDYN and more recently in 2017 in the frame of the working group established by EU for the revision of EC8), all in the framework of the ongoing revision of EC8 Part1. It will comprise: (a) a short description of the present status of the seismic hazard assessment in Europe; (b) short description of the principles of strong ground motion response and site effects and their implications for seismic risk characterization and the evaluation of design seismic actions; (c) proposal of an improved soil classification scheme meeting the needs of modern seismic design codes; (d) proposition of intensity, soil and period dependent amplification factors of the design elastic response spectra; (e) proposition of aggravation factors to account for basin and valley effects along with limited local information.

Dr. Hing-Ho Tsang

HING-HO TSANG is currently a Senior Lecturer at Swinburne University of Technology, Australia, since 2013. He taught 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 from 2012 to 2015 and developed a seismic design guideline for the Hong Kong Housing Authority. He has published over 120 technical publications and won six research awards.

SYNOPSIS OF HIS PRESENTATION: His presentation is about the response spectrum models for rock and various soil types as proposed in the Draft NA to Eurocode 8. The basis and rationale behind the adopted approach will be discussed.