# 2 Day Course On







# Introduction To Earthquake Resistant



## 25 & 26 October 2017

Cape, Universiti Teknologi Petronas Menara Kembar Bank Rakyat 33, Jalan Rakyat, Brickfields 50470 Kuala Lumpur

8:30 a.m. – 6:00 p.m.

### Introduction

The Objectives:

To provide knowledge and skills for Malaysian Practitioners in the construction industries on the earthquake analysis and design of building

- 1. To expose the earthquake design principles to local engineers
- 2. To render professional services in earthquake regions

The main cause of damage to structures during an earthquake is their response to ground motions which are the loadings at the base. In order to design the structure under this type of loading condition, the principles of earthquake resistant design must be understood well. With the introduction of the Eurocode 8 which is going to be the main design code to be used for earthquake resistant design in Malaysia, practitioners must be prepared to comprehend its principals and procedures.

Designing for earthquake also needs the introductions of dynamic loading. When considering the analysis of structures for dynamic motions, the loading and all aspects of the response vary with time. This results in possible solutions at each instant during the time interval under consideration. From an engineering standpoint, the maximum values of the structural response are usually the ones of particular interest, especially in the case of structural design. Thus, the understanding of basic structural dynamic analysis and principal in earthquake design especially under the new code of EC8 are important for all engineers to understand.

### **The Speaker**

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).

Since the setting up of e-SEER in 1998, the group had successfully obtained research funds of more than RM 6 million through the Ministry of Science, Technology, and Innovation (MOSTI) and Construction Industry Development Board (CIDB) with 13 research titles as the project leader. All projects funded are related to earthquake studies; for examples, "Development of Seismic Design Code for Malaysia", "Development of Earthquake Hazard Reduction Material Using Steel and Natural Rubber", "Bridge Conditional Rating Using Artificial Neural Network Considering Earthquake Effects", "Seismic Hazard and Risk Assessment for Malaysia", and "Application of Base Isolation System to Bridges in Malaysia".

Dr. Azlan has received five international and many national awards. He received awards for his invention, "Digital Triaxial Seismo Accelerograph using Single Mass and Hall Sensors (SEER-SAG)"; a gold medal in the 2005, 33rd International Exhibition on New Techniques, Innovation and Product at Geneva, Switzerland, and a bronze medal in the IENA 2004, International Trade Fair "Ideas-Inventions-New Products" at Nuremberg, Germany. He has also received the Malaysian Construction Industry Excellence Awards for the year 2005 and 2008 under the category "R&D Project of the Year Award". His invention of the "Intelligent Structural Conditional Rating Inspection System (SEER-INTEL)", has won a gold medal in the Malaysia Technology Expo (MTE), 2008 and a silver medal in the Invention and New Product Exposition (INPEX) 2008 at Pittsburg, Pennsylvania, USA. His latest inventions of SEER-SAC and SEER-iBLOCK received two gold medals and "Innovation of the Year Award" at British Invention Show (BIS2013) in London.

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 new Pan-Borneo Sarawak Highway Project, 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 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, his goal is to see more local engineers to incorporate and adopt seismic design in their contruction projects in Malaysia.

## Programme

#### <u>Day 1</u>

08.30am - 9.00am 09.00am – 10.30am 10.30am - 10.45am 10.45am - 12.30am	Registration Introduction to Eurocode 8 Tea Break Basic Requirement and Design Criteria
12.30pm - 02.00pm	Lunch
02.00pm - 03.30pm	Seismic Actions
03.30pm - 03.45pm	Tea Break
03.45pm - 05.00pm	Example
05.00pm - 06.00pm	Q & A

#### <u>Day 2</u>

08.30am - 9.00am	Registration
09.00am – 10.30am	Analysis Methods
10.30am - 10.45am	Tea Break
10.45am - 12.30am	Design of Members
12.30pm - 02.00pm	Lunch
02.00pm - 03.30pm	Requirement for Seismic
	Isolation
03.30pm - 03.45pm	Tea Break
03.45pm - 05.00pm	Example
05.00pm - 06.00pm	Q & A

## **Registration Fee**

MSSA Members:RM750.00 +GST 6% = RM 795.00 Non-Members: RM850.00 + GST 6% = RM 901.00 [MSSA GST No. 001286418432]

## **Terms and Conditions**

Registration is only valid if all fees are paid in advance. Confirmation and reservation will be on a first-come first-serve basis. The organisers reserve the right to make any changes.

Photocopied forms are accepted. Any cancellation or replacement will have to be conveyed to the Secretariat before the **23<sup>rd</sup> October 2017**. Paid registration is not refundable for any cancellation made after the deadline.

## The MSSA Secretariat

All completed forms should reach the address below not later than **23<sup>rd</sup> October 2017**.

Malaysian Structural Steel Association (MSSA) Oasis Square C-11-3A, Block C, No. 2 Jalan PJU 1A/7A Ara Damansara, PJU 1A, 47301 Petaling Jaya

Tel: +603-7734 3737 / 7734 3377 Email:corporate@mssa.org.my/<u>aliff.mssa@gmail</u>. com

For further Information, contact: Aliff Imran or Fatilah Fatin at **+603-7734 3737** 

#### **REGISTRATION FORM**

NAME:	
POSITION:	
ORGANISATION:	
FULL ADDRESS :	
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GROUPREGISTRATION(ifapplicable)NAME: PROF. / ASS. PROF. / DR. / IR. / MR. / MRS.POSITION

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#### PAYMENT

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#### DATE: \_\_\_\_

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corporate@mssa.org.my

#### PROGRAMME

To provide knowledge and skills for Malaysian Practitioners in the construction industries on the earthquake analysis and design of bridges

- 1. To expose the earthquake design principles to local engineers
- 2. To render professional services in earthquake regions

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Date: 25 - 26<sup>th</sup> October 2017

Duration: 2 Days

Time: 9.00am – 6.00pm

Venue: Cape UTP, Menara Kembar Bank Rakyat

Fees: MSSA Member

RM750.00 +GST 6% = RM 795.00

Non member

RM850.00 + GST 6% = RM901.00

\* Fees inclusive of, course materials, light refreshment and lunch.

\* Certificate of Attendance will be issued to participants with at least 75% attendance.

For further information and registration please contact MSSA Secretariat (Aliff Imran) at 603-7734 3737 / 603 7734 3377 or email to corporate@mssa.org.my / aliff.mssa@gmail.com

MALAYSIAN STRUCTURAL STEEL ASSOCIATION Oasis Square, C-11-3A, Block C. No. 2, Jalan PJU 1A/7A, Ara Damansara, PJU 1A, 47301 Petaling Jaya, Selangor Darul Ehsan, Malaysia Tel : +603-7734 3737 / 7734 3377 Website: www.mssa.org.my