



## The Pre-SEAGC Conference:

*One Day Short Course on Mitigation of Earthquake Damage from Ground Liquefaction and Early Warning Techniques for Mitigating Rainfall-Induced Slope Disasters*

**Sunday, 29<sup>th</sup> May 2016**

**Course Registration Fees**  
*(Including GST & HRDF Claimable)*

**IEM, SEAGS, AGSSEA, ICE Members**

**MYR 424.00/person**

**Non IEM, SEAGS, AGSSEA, ICE Members**

**MYR 530.00/person**

Chairman,  
IEM Academy Sdn Bhd  
P.O. Box 224, Jalan Sultan  
46720 Petaling Jaya, Selangor Darul Ehsan

No	Name(s)	M'ship No.	Grade	Amount (MYR)
<b>TOTAL (MYR):</b>				

Name of Organization: \_\_\_\_\_

Address: \_\_\_\_\_

Tel(O): \_\_\_\_\_ Mobile No.: \_\_\_\_\_

E-mail Address: \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

**(CLOSING FOR REGISTRATION: 17<sup>TH</sup> MAY 2016)**



## The Pre-SEAGC Conference:

*One Day Short Course on Mitigation of Earthquake Damage from Ground Liquefaction and Early Warning Techniques for Mitigating Rainfall-Induced Slope Disasters*

**Sunday, 29<sup>th</sup> May 2016**

**8.30 am to 6.30 pm**

**BEM APPROVED CPD/PDP HOURS: 7.0**

**REF. NO. : IEM16/HQ/060/C**



Special Invited Guest Presenters:  
*Professor Kenji Ishihara & Professor Ikao Towhata*

Venue:  
**Tan Sri Prof. Chin Fung Kee Auditorium, Wisma IEM, Jalan Selangor, 46000 Petaling Jaya, Selangor, Malaysia**

Organised by:  
**Geotechnical Engineering Technical Division (GETD), IEM**

Supported by:  
**The Southeast Asian Geotechnical Society (SEAGS)**  
**The Association of Geotechnical Societies in Southeast Asia (AGSSEA)**  
**The Institution of Civil Engineers (ICE)**

Managed by:  
**IEM Academy Sdn Bhd**



## COURSE CONTENT

The course shall deal with 2 areas of geotechnical engineering:

- mitigation of earthquake damage from ground liquefaction, and
- early warning techniques for mitigating rainfall-induced slope disasters.

The first covers ground liquefaction induced by earthquakes. It deals in detail with the dilatancy law and friction law which govern the behaviour of sand to provide the understanding for how cyclic loadings can generate pore water pressures leading eventually to liquefaction. The dilatancy law describes the volumetric changes in sand due to shear stress application whilst the friction law covers the fact that the development of shear strains is governed by the shear stress ratio and not by the shear stress itself. Typical laboratory tests will be described to reproduce the pore water buildup in the field during earthquakes and the results given. Then, the procedure to estimate seismic liquefaction potential in saturated sand deposits in-situ will be illustrated together with several examples. As the consequence of liquefaction being associated with the varying levels of damage that would be represented by the settlement resulting from the dissipation of excess pore water pressures, the method for assessing the settlements will be discussed together with some actual examples of damage. Ground improvement techniques necessary for mitigating seismic liquefaction shall be described by first presenting the basic principles of mitigation. Then examples of mitigation techniques shall be provided that include soil densification, accelerated drainage, grouting/solidification and underground square grid walls. The mitigation objectives follow the 'performance-based design' principle that allows for the factor of safety less than 1.0 provided the damage is small. The part on early warning techniques for mitigation of rainfall-induced slope disasters shall provide examples of recent disasters. It describes the role of rock weathering characteristics in landslide processes to support the significance of early warning and evacuation for areas of potential disasters. The use of early warning criteria for rainfall and ground deformation will be discussed together with the limitations of the technique.





## The Pre-SEAGC Conference:

*One Day Short Course on Mitigation of Earthquake Damage from Ground Liquefaction and Early Warning Techniques for Mitigating Rainfall-Induced Slope Disasters*

**Sunday, 29<sup>th</sup> May 2016**  
8.30 am to 6.30 pm

## TENTATIVE PROGRAMME

08:30am - 09:00am	Registration, Scan-in & Welcome Coffee
09:05am - 09:10am	Opening Remarks & Introduction by Session Chairman
09:15am - 10:15am	Lecture 1
10:20am - 10:35am	Coffee/Tea Break
10:40am - 11:40am	Lecture 2
11:45am - 12:15pm	Questions and Answers Session
12:20pm - 02:20pm	Lunch
02:25pm - 03:35pm	Lecture 3
03:40pm - 04.40pm	Lecture 4
04:45pm - 05:00pm	Conclusions
05:05pm - 05:25pm	Questions and Answers Session
05:30pm - 06:00pm	Scan-out & Collection of Certificate

~~~~~  
*Ir. Yee Thien Song*

**Chairman, Geotechnical Engineering Technical Division  
The Institution of Engineers, Malaysia (IEM)**

~~~~~

## ABOUT THE INVITED PRESENTERS



**Professor Kenji Ishihara** was born in Chiba, Japan and started his studies in Civil Engineering at the University of Tokyo, obtaining BS-degree in 1957, MS-degree in 1959, and Ph D. in 1963. During one-year period from 1966 to 1967, he was a Visiting Research Associate at the University of Illinois in Urbana U.S.A. under the guidance of late Professor R. B. Peck. He has been affiliated with the University of Tokyo since then, taking the post of professorship in geotechnical engineering since 1977. On his retirement from the University of Tokyo in 1995 he took up the post of Professor of Geotechnical Engineering at the Tokyo University of Science and then at Chuo University in 2001. He has also received honour by being awarded H. B. Seed Gold Medal in 1998 from American Society of Civil Engineers. For his significant contribution, title of Honorary Doctorate was given to him from Technical University of Bucharest, Romania in 1995 and from Istanbul Technical University, Turkey in 1999. In 2000, he was honoured by being bestowed the most prestigious Japan Academy Prize. In 2010, he was elected to Foreign Associate of the United States Academy of Engineering. In commemoration of his long-time contribution to the profession, International Conference on Earthquake Geotechnical Engineering was held in Istanbul by the effort of Professors A. Ansal and M. Sakr and two volumes of selected papers were published on this occasion containing major publications by Professor Ishihara. On his retirement from the University of Tokyo in 1995, he took up the post of professorship at the Tokyo University of Science and then at Chuo University in 2001.



**Professor Ikuo Towhata** obtained his Bachelor of Engineering from the University of Tokyo in 1977. He then obtained his Master of Engineering and Doctor of Engineering from the same university in 1979 and 1982 respectively. He has worked in various capacities at the University of Tokyo, University of British Columbia, Asian Institute of Technology in Bangkok, Chulalongkorn University in Bangkok and the Public Works Research Institute in the Ministry of Construction of Japan. He was professor at the University of Tokyo and is presently visiting professor at the Kanto Gakuin University, Yokohama, Japan. He also is a technical advisor for three private sectors. He was the International Reviewer of the Journal of Korean Geotechnical Society, Member of Editorial Board for International Journal of Civil Engineering (Iranian Society of Civil Engineers) and the Chairman of Editing Committee of Soils and Foundations Journal (the Japanese Geotechnical Society). He is the Secretary of Kanto Chapter, Japanese Geotechnical Society since 2006 and Chairman of Geotechnical Committee, Japan Society for Civil Engineers since 2007.



## Information for Payment

- ✓ For **ONLINE REGISTRATIONS**, only ONLINE PAYMENT is applicable [via Maybank2u –Personal Saving & Personal Current; Credit Card - Visa/Master].
- ✓ For **NORMAL REGISTRATIONS**, Payment via CASH / CHEQUE / BANK-IN TRANSMISSION / BANK DRAFT / MONEY ORDER / POSTAL ORDER / LO / WALK -IN will be considered as NORMAL REGISTRATION
- ✓ FULL PAYMENT must be settled before commencement of the course, otherwise participants will not be allowed to enter the hall.
- ✓ For CASH: RM ..... enclosed.
- ✓ For CHEQUE: Cheque no. \_\_\_\_\_ for the amount of RM \_\_\_\_\_ (non-refundable) and made payable to "IEM ACADEMY SDN BHD" AND "CROSSED A/C PAYEE ONLY".

## Terms & Conditions

- ✓ If a place is reserved and the intended participants fail to attend the course, the fee is to be settled in full.
- ✓ Fee paid is not refundable. Registration fee includes lecture notes, refreshment.
- ✓ 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.

➤ **I/We\* understand that the fee is not refundable if I/We withdraw after my/our\* application is/are\* accepted by the Organising Committee but substitution of participant will be allowed.**

➤ **If I/We\* fail to attend the Course, I/We will still pay the registration.**

## DATA PROTECTION ACT

- ✓ I have read and understand the IEM's Personal Data Protection Notice published on IEM's website at <http://www.myiem.org.my> and I agree to IEM's use and processing of my personal data as set out in the said notice.

## CANCELLATION POLICY

IEM reserves the right to postpone, reschedule, allocate or cancel the Course. No cancellation of registration will be accepted 1 day prior to the date of the event or during the event day. Replacement or substitute name and additional fees however, can be made at least 3 days prior to the event date.