



The Institution of  
**StructuralEngineers**

# **TWO-DAY REFRESHER COURSE “IN STRUCTURAL ENGINEERING WITH PARTICULAR REFERENCE TO THE CHARTERED MEMBERSHIP EXAMINATION OF THE INSTITUTION OF STRUCTURAL ENGINEERS, UNITED KINGDOM”**

**SPEAKER:**

**Mr Rajavel Inbarajan**

**Mr Steve Yeung**

**Date : 20<sup>TH</sup> – 21<sup>ST</sup> NOVEMBER 2019 (Wednesday & Thursday )**  
**Venue : Ballroom, Level 3**  
**ARMADA HOTEL, Petaling Jaya, Selangor**  
**Time : 9.00 a.m. – 5.30 p.m.**

**BEM Approved CPD/PDP Hours: 13.5  
(IEM19/HQ/419/C)**

**Closing Date: 15<sup>TH</sup> NOVEMBER 2019**

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

**Jointly Organized & Hosted by:**

**Civil & Structural Engineering Technical Division (CSETD), IEM and  
The Institution of Structural Engineers, Malaysia Regional Group (IStructE)**

**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**

I have read and understood 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.

**“IEM reserves the right to alter or cancel the programme due to unforeseen circumstances at its discretion’.  
For intending participants who choose to ‘walk in without prior registration’,  
IEM SHALL NOT be responsible for any direct or consequential losses”.**

## **SYNOPSIS**

This 2-Day Refresher Course in Structural Engineering is aimed at those aspiring senior and young engineers, who wish to enhance and improve their skills on structural analytical and conceptual design of structures in their day to day tasks in a design office. In order to achieve the intended objectives, the format of the course is, therefore, devised like an examination preparation workshop for the world renowned 7-hour Chartered Membership Examination (CME) of the Institution of Structural Engineers, United Kingdom. One of the prime objectives of the examination is to test the technical competency and skillfulness of the candidates in executing their daily work with respect to the art and science of Structural Engineering. Hence, in this respect, the course will attempt to illustrate required structural design skills, ability in conceptualizing distinct and viable structural schemes and producing drawings for a given task that will be based on some of the past CME questions, which are normally derived from real projects around the world.

By the end of the course, the participants should be able to;

1. describe the general principles and techniques for the successful completion of the question,
2. demonstrate these principles by discussing real questions on different types of structures and
3. judge the requirements of the examination and understand the expectations of the Examiners

## **WHO SHOULD ATTEND**

This course is organized not only for those intending to take the CME but also for those who wish to improve, *inter alia*, their skills in conceptual design of structures in general. Therefore, this course is suitable for practicing civil and structural engineers and young engineers in their formative years. It is advised that the participants shall bring calculators as design exercise to be carried out.

## **SPEAKERS**

### **Mr Rajavel Inbarajan**

**MIStructE, DIC, MSc(Lond), BE(Madras)**

**Chartered Structural Engineer/ Independent Engineering Consultant**

**Mr Rajavel Inbarajan** obtained his BE (First Class with Distinction) in Civil Engineering from the University of Madras in 1988 and then obtained his MSc and DIC in Concrete Structures from the University of London and Imperial College London in 1997. He is a Corporate Member of the Institution of Structural Engineers (IStructE), UK, since 2004. The IStructE appointed him as an Examiner for the Chartered Membership Examination (CME) in 2008. He continues in this prestigious role ever since. He is one of the Chief Examiners for the January 2019 CME.

He has more than 25 years of quality and varied experience in conceptual design, detailed design and project management of very large structural and civil engineering projects in international and cross cultural set-up. He had been working with reputable International Consultants and Contractors in very large engineering projects with increasing responsibilities in Qatar, United Arab Emirates, Saudi Arabia, Oman, Singapore, Sri Lanka and India since 1988. His experience broadly covers the design and construction of high rise buildings, bridges, underground/above ground metro stations, mega water retaining structures/reservoirs, and the investigation/rectification of very large marine structures.

He had conducted seminars on Advance Structural Engineering, Water Retaining Structures and Investigation and Strengthening of Concrete Structures in Malaysia, Qatar and Sri Lanka previously. He has been delivering talks on CME and training enthusiastic candidates globally in their preparation for CME. Recently, he provided probable solution for the CME questions for publication in the examination preparation CD and the website of the IStructE.

### **Mr SteveYeung**

**BE (Hons), ME PE(Civil), MIStructE, MIEAust CPEng, Dfs Professional**

**Director of WME (South East Asia)**

**Mr Steve Yeung**, Director of WME (South East Asia) Pte Ltd, graduated from the University of Sydney, Australia with Bachelor (Hons) and Master of Civil Engineering Degrees. He has been a Marking Examiner for IStructE; participating in marking the CME scripts annually since 2007.

Steve has over 28 years of working experience in the offshore oil-&-gas, mining and power generation industries. He has worked as structural design engineer, project engineer, project manager and engineering manager. He commenced his career in Australia before relocating to Singapore in 1999. He is a registered Professional Engineer (Civil) in Singapore and Chartered Member of IStructE.

# PROGRAMME

## TENTATIVE COURSE SCHEDULE & OUTLINE

### DAY – 1 (20 November 2019)

CONCRETE STRUCTURES & FOUNDATIONS	
08.30 – 9.00	Registration of Participants Welcome Coffee & Tea
09:00 – 09:45	CME of IStructE – A chief examiner's perspective
09:45 – 10:30	Structural systems for concrete structures <ul style="list-style-type: none"> <li>• Shear wall arrangements</li> <li>• Floor systems</li> </ul>
10:30 – 11:00	Morning Tea Break
11:00 – 11:45	Structural systems for foundations <ul style="list-style-type: none"> <li>• Shallow foundations</li> <li>• Deep foundations</li> <li>• Earth retaining and supporting structures</li> </ul>
11:45 – 12:30	Analytical and design tools <ul style="list-style-type: none"> <li>• Approximate analysis</li> <li>• Thumb rules</li> </ul>
12:30 – 01:30	Lunch Break
01:30 – 02:45	Water retaining / basement / underground structures <ul style="list-style-type: none"> <li>• Watertight design – Crack width (EC2: Part 3)</li> <li>• Basement grades</li> <li>• Waterproofing protection</li> </ul>
02:45 – 03:30	<ul style="list-style-type: none"> <li>• Functional framing, load transfer, serviceability and stability aspects of schemes</li> <li>• Review and critical appraisal of schemes</li> </ul>
03:30 – 04:00	Afternoon Tea Break
04:00 – 05:30	Probable solution for IStructE's past CME Questions <ul style="list-style-type: none"> <li>• Mixed use building - Q2 CME Jan 2019</li> <li>• Water tank - Q4 CME Jan 2018</li> <li>• Mixed use development - Q2 CME July 2018</li> <li>• Multi-storey hotel - Q4 CME July 2019</li> </ul>
05:30 – 05:45	Q & A End of Workshop on Day 1

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

# TENTATIVE COURSE SCHEDULE & OUTLINE

## **DAY – 2 (21 November 2019)**

<b>STEEL STRUCTURES</b>	
<b>08.30 – 9.00</b>	<b>Registration of Participants (Sign in for Day 2) Welcome Coffee &amp; Tea</b>
09:00 – 09:45	Purpose of the CME and its structure
09:45 – 10:30	Conceptual design
<b>10:30 – 11:00</b>	<b>Morning tea break</b>
11:00 – 11:30	Communication with a client using letter
11:30 – 12:30	Structural design of all principal elements
<b>12:30 – 01:30</b>	<b>Lunch Break</b>
01:30 – 02:45	Structural drawings
02:45 – 03:30	Construction issues
<b>03:30 – 04:00</b>	<b>Afternoon Tea Break</b>
04:00-04:30	Preparation for the exam
04:30 – 05:30	<ul style="list-style-type: none"><li>Structural scheming – Steelwork</li></ul> CME Jan 2019 Q1. New Research and Manufacturing Facility
05:30 – 05:45	Q & A End of Workshop on Day 2

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

### **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, Selangor  
Tel: 603-7968 4001/2 Fax : 603-7957 7678 Email : [shahrul@iem.org.my](mailto:shahrul@iem.org.my)

## REGISTRATION FORMS

**TWO-DAY REFRESHER COURSE  
"IN STRUCTURAL ENGINEERING WITH PARTICULAR REFERENCE TO THE CHARTERED MEMBERSHIP  
EXAMINATION OF THE INSTITUTION OF STRUCTURAL ENGINEERS, UNITED KINGDOM"**

Jointly organized by : Civil & Structural Engineering Technical Division & The Institution of Structural Engineers, Malaysia Regional Group (IStructE)

**20<sup>TH</sup> – 21<sup>ST</sup> NOVEMBER 2019 (Wednesday & Thursday)**

Fax: 03-7957 7678      Email: [shahrul@iem.org.my](mailto:shahrul@iem.org.my)

### REGISTRATION FEE (SUBJECT TO 6% SST)

	ONLINE FEE (RM)	NORMAL FEE (RM) (via Email/Walk In)
<b>IEM Student Members</b>	250.00	280.00
<b>IEM Graduate Members</b>	500.00	600.00
<b>IEM Corporate Members</b>	800.00	900.00
<b>Non-IEM Members</b>	1100.00	1200.00
<b>IStructE Members</b>	Strictly Registration via NORMAL as per IEM's Members Rates	

No	Name(s)	Membership No.	Grade	Fee (RM)*
SUB TOTAL				
ADD 6% SST				
<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'". Bank Account No. : 640320010020215,**  
**Bank Name: Alliance Bank Malaysia Berhad. (SHOULD PAYMENT IS MADE, KINDLY EMAIL THE 'BANK-IN-SLIP' TO IEM FOR VERIFICATION BEFORE THE EVENT FOR EASY REGISTRATION)**

**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. The 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 No : \_\_\_\_\_ (O)

Handphone: \_\_\_\_\_ (HP)      Email: \_\_\_\_\_

Signature & Stamp

Date

**TERMS & CONDITIONS:**

- For ONLINE REGISTRATIONS, only ONLINE PAYMENT is applicable [via RHB and Maybank2u – Personal Saving & Personal Current ; Credit Card - Visa/Master.
- Payment via CASH / CHEQUE / BANK-IN TRANSMISSION / BANK DRAFT / MONEY ORDER / POSTAL ORDER / LO / WALK -IN will be considered as NORMAL REGISTRATION
- The Organising 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.

# ADVERTISEMENT BOOKING FORM (PROCEEDING MATERIALS)

**TWO-DAY REFRESHER COURSE**  
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Jointly Organised by :  
**Civil and Structural Technical Division (CSETD), The Institution of Engineers, Malaysia**  
 &  
**The Institution of Structural Engineers, Malaysia Regional Group (IStructE)**  
 No. 60/62, Jalan 52/4, P.O. Box 223 (Jalan Sultan), 46720 Petaling Jaya, Selangor  
 Tel No. 03-79684001/26 Fax No. 03-79577678 Email: [shahrul@iem.org.my](mailto:shahrul@iem.org.my)

**Ir. Chong Chee Meng,**  
 Chairman, Civil & Structural Engineering Technical Division (CSETD)

We would like to place an advertisement in the bound volume of the **2-DAY COURSE (20-21 NOVEMBER 2019)** materials as indicated below and attach herewith a cheque no. .... for the sum of RM ..... made payable to **“THE INSTITUTION OF ENGINEERS, MALAYSIA”** being our booking fees:-

Tick (√)	Location	Advertisement Rates (PLS ADD-IN 6% SST CHARGES)	Complimentary Participant Seat
	Outside Back Page (Colour)	RM 6,000.00	3 seats
	Inside Front Page (Colour)	RM 4,500.00	2 seats
	Inside Back Page (Colour)	RM 4,500.00	2 seats
	Inside Run of Page (Colour)	RM 2,500.00	1 seat

**\*Advertisement Artwork must be accompanied with Payment before printing.**

**For Company that would like to take up ‘Exhibition Booth’, kindly contact the CSETD Secretariat directly as the price for Exhibition Booth is different than the above.**

**Payment information:**

✓ Account Name : THE INSTITUTION OF ENGINEERS, MALAYSIA
✓ Account Number: 6403-200-1002-0215
✓ Bank Name : ALLIANCE BANK MALAYSIA BERHAD
✓ Bank Address : NO 53 & 55, JALAN SS2/55, 47300 PETALING JAYA, SELANGOR
✓ Swift Code : MFBBMYKL

**Contact Information:**

<b>Contact Name:</b>				
<b>Organisation:</b>				
<b>Position:</b>				
<b>Mailing Address:</b>				
<b>Contact Nos.:</b>	Tel:		Fax:	
<b>Hand phone No.</b>				
<b>E-mail:</b>				

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

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

Company Stamp: