REGISTRATION FORM

1-DAY WORKSHOP ON "DESIGN & CONSTRUCTION OF CONCRETE STRUCTURE FOR LIQUID RETAINING AND CONTAINMENT AS PER EC2 : PART 3 AND BASEMENTS/UNDERGROUND FACILITIES AS PER EUROCODES"

14th July 2017, Friday | ARMADA Hotel

Fax: 03-7957 7678 **Email: shahrul@iem.org.my**

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

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. 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)

_____ (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, Selangor
Tel : 603-7968 4001/2 **Fax** : 603-7957 7678 **Email** : **shahrul@iem.org.my**

IEM The Institution of Engineers, Malaysia

The Institution of Structural Engineers

1-Day Workshop On "Design & Construction Of Concrete Structures For Liquid Retaining And Containment As Per EC2 : Part 3 And Basements/Underground Facilities As Per Eurocodes"

SPEAKER ;
Mr. Rajavel Inbarajan

Date : **14 July 2017 (Friday)**
Venue : **ARMADA HOTEL, Petaling Jaya, Selangor**
Time : **8.30 a.m. – 5.30 p.m.**

BEM Approved CPD/PDP Hours: 6.0 Ref : IEM17/HQ/217/W

Registration Fee (SUBJECT TO 6% GST)		
	ONLINE	NORMAL (MYR)
IEM Student Members	150.00	180.00
IEM Graduate Members	250.00	300.00
IEM Corporate Members	400.00	450.00
Non-IEM Members	550.00	600.00
**GST is implemented effective from 1st April 2015*		

 # For IStructE Members (all categories), shall also enjoy similar IEM Members ONLINE RATES, but via Normal Registration.

Closing Date: 10 July 2017

NO online registration will be allowed after the closing date

Cancellation Policy

IEM reserves the right to postpone, reschedule, allocate or cancel the course. Full refund less 30% if cancellation is received in writing more than 7 days before start date of the event. No cancellation will be accepted prior to the date of the event. However, replacement or substitute may be made at any time with 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.

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

SYNOPSIS

The workshop, *inter alia*, mainly covers the design and construction of concrete structures for liquid retaining and containment as per the Eurocode 2: Part 3. The presentation generally highlights the arrangements of Eurocodes and focuses on EC2: Part 3 with particular reference to Malaysia National Annex. The changes required on EC2: Part 1for the design of liquid retaining and containment structures as per EC2: Part 3 are focused in the presentation. Serviceability limit state and ultimate limit state design requirements are discussed in details. Focus is given to water retaining and containment structures though the code covers a wide range of liquids.

The workshop also covers the basement structure design requirements for wet and dry conditions as a matter of interest and connectivity. The best practice detailing requirements will be highlighted to achieve the design intent with respect to both SLS and ULS requirements.

Design example will be explained in the Workshop and participants are expected to solve design examples. Therefore, the participants are requested to bring their own calculators. In addition, a probable solution for a past year Chartered Membership Examination question will be explained in details for the benefit of the aspiring young engineers who wish to sit the world renowned 7-hour Chartered Membership Examination of the IStructE in future.

WHO SHOULD ATTEND

This workshop is suitable for practicing civil and structural engineers, young engineers in their formative years, engineering students and academics who wish to enhance their knowledge and understanding on the design and construction of mega water retaining and basement structures.

ABOUT THE SPEAKER

Rajavel Inbarajan
MIStructE, DIC, MSc(Lond), BE(Madras)

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 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 and Water Retaining Structures in Malaysia, Qatar and Sri Lanka in the recent past. 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 of the IStructE.

Tentative Seminar Schedule & Outline

08:30 - 09:00	***Registration of Participants***
09:05 – 10:30	**Session 1: Concrete Structures for Water Retaining/Containment** **Topic : Design Codes** ❖ Brief overview of BS8007 and EC2:Part 3 ❖ Connectivity of EC2:Part 3 to EC0, EC1 & EC2:Part 1 ❖ Water Tightness Class
10:30 – 10:55	Morning Tea Break
11:00 – 12:15	**Session 2: Concrete Structures for Water Retaining/Containment** **Topic: Design & Construction issues** ❖ Rectangular and Cylindrical Tanks ❖ Application of Prestressed Concrete in Cylindrical Water Tanks ❖ Tutorials
12:20 – 2:20	Lunch & Break for Friday Prayer (for Muslim)
2:30 – 3:30	**Session 3: Concrete Basements/Underground Facilities** **Topic: Design Codes** ❖ Water Resisting Design as per EC2 ❖ Protection Types and Waterproofing Grades as per BS8102 ❖ Detailing and Workmanship of Joints
3:35 – 3:50	Afternoon Tea Break
3:55 – 5:15	**Session 4: Probable Solution for IStructE CME Question** **Topic: Flood Alliviation Tank** ❖ Brief introduction to the Format of Chartered Membership Examination of IStructE ❖ Two distinct and viable Schemes
5.15 – 5:30	Feedback / Questionnaires End of Workshop