



The Institution of Engineers, Malaysia (Sabah Branch)

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2 Day Course on “Forensic Engineering for Civil, Structural and Geotechnical Engineers – Technical & Legal Issues”

Date : 28 & 29 January 2013 (Monday & Tuesday)
Time : 8.30 am – 5.00pm
Venue : Promenade Hotel, Kota Kinabalu

BEM Approved
CPD HOURS: 12
IEMSABAH/2013/01

Registration Fees (per person)

Membership Grade	Fees
IEM Student	RM 300
IEM Member	RM 750
Non Member	RM 1,000

CIDB CCD Points: 20
CIDBSB/C/2012/0244

Note: Please register early. Participants must fulfill at least 75% of attendance per event to be eligible for CPD certificate.

THE SYNOPSIS

Construction failures often lead to litigation process which could have serious consequences for developers, consultants, contractor and individuals in terms of structural rehabilitation and loss of business or life. Successful diagnosing of cause of failures, assessing its consequences, and presenting the findings convincingly are important to this process. Investigation of such failure will provide necessary lessons to be learned by construction professionals so that recurrence of such failures could be eliminated or minimised. Forensic engineering is a field which looks into causes of deficiencies and failures in construction projects and other facilities and helps in the process of testifying in judicial proceedings. This course will highlight the importance of forensic engineering in the investigation of construction failures and subsequent litigation process, common deficiencies in building and geotechnical structures. The main highlights are on the investigation processes of past structural and geotechnical failures and lessons learnt from such investigations.

ABOUT THE SPEAKERS

Er. Prof. Leung Chun Fai

Ph D, CEng, MICE, MIES, PEng(S'pore)

Civil Engineering Department, National University of Singapore

Er. Prof. C F Leung is currently a professor with the department of Civil Engineering at the National University of Singapore. He has published widely in international journals and conference in his specialized field of geotechnical engineering. Dr Leung is a Chartered Engineer of UK and a Professional Engineers in Singapore. He has served as geotechnical Consultant to many government and private sector construction projects in Singapore and Southeast Asia including a good number of cases involving geotechnical failures.

Ir. Prof. Fred S H Ng

Bsc, CEng, FICE, FStructE, FHKIE, MCI Arb, Sr. MIES, PEng(S'pore)

Senior Advisor to the President, The Hong Kong Polytechnic University

Consultant, Babbie (ASIA) Consulting Engineers, Singapore

After obtaining his first degree in Civil Engineering from the University of Aston in Birmingham, England, Ir. Prof Ng gained practical experience and qualified in Civil and Structural Engineering in the UK. He has extensive practical experience in Civil, Structural and Geotechnical engineering in the UK, Hong Kong and Singapore. He was the government Structural Engineers with the Hong Kong Government. He has working experience in an engineering consultancy, real estate developers' and contractors' offices. He has been a practicing forensic engineer and an expert witness for upwards of twenty years. He is also very active in University Works being an Adjunct Professor in Civil Engineering in the University of Hong Kong and Court Member and Adjunct Professor in Civil and Structural Engineering in the Hong Kong Polytechnic University. He was made one of the Outstanding PolyU Alumni in 1997 and awarded a University Fellowship in 2002.

Er. Prof. J Y Richard Liew

PhD, CEng, MStructE, MASCE, Sr.MIES, MSSSS, M.S.I.D, PEng(S'pore)

Civil Engineering Department, National University of Singapore

Er. Prof Liew is currently a professor and the director for hazard and risk mitigation programme in the Department of Civil Engineering at the National University of Singapore. He has published more than 270 papers in international journals and conferences in his specialized field of structural engineering. Prof. Liew is a Chartered Engineer of UK and a Professional Engineer in Singapore. He has served as specialist consultant to many government and private sector construction and offshore projects in Singapore and Southeast Asia. He has investigated a number of structural failures including the Nicoll highway and Fusionpolis collapses. He is an independent director of two public listed companies in Singapore.

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PROGRAMME

Day 1 (28 January 2013)

- 0830 – 0900 Registration
- 0900 – 1100 Geotechnical Engineering by Er. Prof CF Leung
- Investigations of geotechnical problems and failures
 - Common causes of geotechnical problems
 - Design, construction and monitoring of geotechnical infrastructure projects
 - Remedial measures and future precautions
- 1100 – 1130 Morning Refreshment
- 1130 – 1230 Geotechnical Engineering by Er. Prof CF Leung
- Case studies on various geotechnical problems
 - Lessons learnt from cases studies
 - Roles and independence expert witness
- 1230 – 1330 Lunch
- 1330 – 1430 Geotechnical Engineering by Er. Prof CF Leung
- 1430 – 1500 Tea Break
- 1500 – 1700 Forensic Engineering I – An introduction to Forensic Engineering by Ir. Prof Ng
- The application of the art and science of engineering to the matters at issue in the jurisprudence system;
 - Investigations, analysis and report;
 - How a forensic engineering case is handled;
 - The forensic engineer's reports are subjected to close and aggressive scrutiny by some of the best qualified person available;
 - Ethical and Professional Responsibilities;
 - The legal system in the common law regime;
 - The law Courts and Tribunals;
 - Case Studies – with excerpts of some recent cases dealt with;
 - Other duties expected from a Forensic Engineer.

Day 2 (29 January 2013)

- 0830 - 0900 Registration
- 0900 - 1100 Forensic Engineering II – Expert Evidence and Expert Witness by Ir. Prof Ng
- Expert evidence – What is it and What is its origins;
 - Who is considered qualified to provide such evidence;
 - Importance of qualifications and practical experience;
 - Duties of an Expert;
 - Court appointed Expert;
 - Preparation of Expert Evidence – factual, simple, planning and structure, immunity and liabilities;
 - Dos and Don'ts of an Engineering Expert
 - What are lawyer looking for
 - Briefing of the solicitor, Counsel and SC;
 - The Expert witness in Court;
 - The Anatomy of a Court Case;
 - Giving Expert Evidence in Court or Tribunal;
 - Conduct of an Expert Witness in Court;
 - The Expert's professional fees;

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- The Expert having a Financial Interest in the outcome of the case and the Declaration
- Dos and Don'ts of an Engineering Expert
- What are lawyers looking for?
- Briefing of the Solicitor, Counsel and Senior Counsel;
- The expert witness in Court;
- The Anatomy of a Court Case;
- Giving Expert Evidence in Courts or Tribunals
- Conduct of an Expert Witness in Court;
- The Expert's Professional fees;
- The Expert having a Financial Interest in the outcome of the case and Declaration.

1100 – 1130

Morning Refreshment

1130 – 1230

Structural Engineering by Er. Prof Liew

- Investigations of structural problems and failures
- Common causes of structural problems
- Design, construction and monitoring of structural infrastructure projects
- Structural integrity and robustness and their design implications
- Remedial measures and future precautions

1230 – 1330

Lunch

1330 – 1500

Collapse Investigations by Er. Prof Liew

- Case studies on Structural Roof collapse
- Proper connections and welding defects
- Problems with cantilever structures
- Stability issues during construction

1500 – 1530

Tea Break

1530 – 1700

Case studies by Er. Prof Liew

- Nicoll highway collapses, prosecution expert witness
- Fusionpolis collapse, defense expert witness

REGISTRATION FORM

**2 Day Course on
 'Forensic Engineering for Civil, Structural and Geotechnical Engineers – Technical & Legal Issues'**

I/We wish to participate in the above course on Monday & Tuesday, 28th & 29th January 2013. (8.30am – 5.00pm)

Name (s)	I/C No.	BEM No.	IEM No.	Reg. Fees (RM)
Total RM				

Contact Person : Designation :

Address : Tel No. :

..... Fax No. :

..... Email :

Organization :

.....
 (Date) **- Please bring along this flyer for confirmation of attendance -** (Signature)

-Photostat copies are acceptable -

I/We understand that the fee is not refundable if I/we withdraw after my/our application(s) is/are accepted by the IEM Sabah. However, substitution of participants will be allowed. If I/we fail to attend the course, I/we will still settle the registration fee in full.