



**Joint Structural Division,
HKIE/IStructE**

Department of Civil and Structural Engineering,
Faculty of Construction and Land Use,
The Hong Kong Polytechnic University.

One hour Technical Seminar

organized jointly by

Department of Civil and Structural Engineering, The Hong Kong Polytechnic University

Joint Structural Division, The Hong Kong Institution of Engineers and

The Hong Kong Institute of Steel Construction

**FORENSIC ENGINEERING -
INVESTIGATIONS AND LESSONS LEARNT FROM STRUCTURAL FAILURES**

7th September 2009 (Monday)

by

Professor J Y Richard Liew

Department of Civil Engineering,

National University of Singapore.

Abstract

Construction failures which may carry a considerable price tag for developers, consultants and contractor in terms of structural rehabilitation and loss of business or life could well lead to dispute and litigation process. Successful diagnosing of cause of failures, assessing its consequences, and presenting the findings convincingly are important to this process. Investigation details of such failure will provide many lessons to construction professionals from past failures so that recurrence of such failures could be eliminated or minimised. Forensic engineering is a field which looks into the causes of structural deficiencies and failures in building structures and other constructed facilities and comes into help in the process of testifying in judicial proceedings. This seminar will highlight the importance of forensic engineering in investigating construction failures, looking for common deficiencies in steel structures, investigating past structural failures and learning the lessons from such investigations.

About the speaker

Richard Liew is a professor and the director for hazard, risk and mitigation programme in the Department of Civil Engineering at the National University of Singapore. He obtained his Ph.D degree in 1992 from Purdue University, USA, specialising in advanced analysis and design of steel structures. He has more than 20 years of research and practical experience on structural steel design and has been consulted on numerous steel design-related construction projects in Singapore, Brunei, Hong Kong and China. He is an international renowned expert recognised for his contributions to advanced structural steel design and ultimate strength analysis of steel, composite, large span and high-rise structures. He is currently the immediate past president of the Singapore Structural Steel Society. Prof. Liew is a Chartered Engineer and Member of the Institution of Structural Engineers in U.K. He is a registered professional Engineer in Singapore. He is a Member-at-large of the Structural Stability Research Council (SSRC) in USA and a member of the working committee on steel, timber and composite structures for the International Association for Bridges and Structure Engineering since 1999. He serves in the international editorial board of five major journals. He was a member of the international advisory board of the committee of the Hong Kong's code of practice for the use of structural steel in buildings. He is a member of a distinguished group of the International Structural Steel Research Advisors of the American Institute of Steel Construction. He received the 3rd Hangai prize from the International Association of Shell and Spatial Structures in 2005 and gold award for the best research paper presented in the Institution of Engineering in Singapore in 2004.

He received numerous teaching awards for conducting courses on advanced structural steel design to post-graduate students and practicing engineers, including subject on strutting design for deep excavation. His major specializations are on collapse analysis and testing of steel frames and joints, advanced numerical modeling and testing of complex structural systems subjected to extreme loads, high-rise steel buildings, large span structures, steel-concrete composite and lightweight structures and fire safety design of structures. Arising from his research works, he has written 4 books and generated some 150 technical publications. He has lectured on post experience courses and delivered keynote lectures at conferences and technical meetings in over 15 countries. He serves in several international advisory boards and national committees related to design standards and product specifications of steel structures. He was an expert witness for investigating the Nicoll highway and fusionpolis collapses. He is the independent director for two public-listed companies in Singapore.

Date: 7th September 2009, Monday
Time: 6:00 pm for 6:30 pm – 7:30 pm
Venue: Room M1603, The Hong Kong Polytechnic University, Hung Hom, Kowloon.
Certificate: An attendance certificate will be issued upon request. **Free attendance** but places are limited. Please send the completed registration form to **Miss Miya Lau, c/o TU743, Department of Civil and Structural Engineering, The Hong Kong Polytechnic University, Hung Hom, Kowloon** by **12:00 noon, 1st September 2009**. (Fax No.: 2334 6389) or through email: miya.lau@inet.polyu.edu.hk.

Reply Form
to be faxed to 2334-6389 or emailed
to miya.lau@inet.polyu.edu.hk by
12:00 noon, 1st September 2009

Registration Form

Seminar Name: **FORENSIC ENGINEERING - INVESTIGATIONS AND LESSONS
LEARNT FROM STRUCTURAL FAILURES**

Seminar Date: 7th September 2009 Monday

Name (in Full): _____ (Mr./Ms./Ir /Dr./Prof.)*
* Please delete as appropriate

Company Name: _____

Contact Tel. No.: _____ Fax: _____ Email: _____

Correspondence Address: _____

HKIE/HKISC Member: Yes Membership Number: _____
(please circle) No

Do you want the Attendance Certificate: Yes No
(please circle)

Please send the completed registration form to **Miss Miya Lau, TU743, Department of Civil and Structural Engineering, The Hong Kong Polytechnic University, Hung Hom, Kowloon** by **12:00 noon, 1st September 2009 (Tuesday)**. (Fax No.: 2334 6389 or miya.lau@inet.polyu.edu.hk)

The registration form may be downloaded from the web-site of The Hong Kong Institute of Steel Construction (<http://www.hkisc.org>). You can photo copy this registration form.

Email confirmation will be provided when the form is received. Please be reminded to provide your email to us.