



**1-day Course on the
WIND LOAD DETERMINATION OF
BUILDINGS IN HONG KONG**
by

Dr. John Holmes

And

Professor C.W. Li

10 June 2009 (Wednesday)

Jointly organized by
The Hong Kong Institute of Steel Construction
&
*Department of
Civil and Structural Engineering,
The Hong Kong Polytechnic University*

sponsored by
The Structural Division, HKIE

supported by
RED Consultants Ltd.

Background : Wind tunnel test is frequently employed in Hong Kong as an alternative of the use of Hong Kong Wind Code to obtain the design wind load. Wind tunnel test and the analysis of its results involve several factors which may not be familiar to structural engineers.

Objectives : The aim of the course is to provide the practicing engineer with an in-depth understanding of the background knowledge and the know-how of using the wind tunnel test results in the structural design of buildings.

Who Should Attend: The course per se is designed for practising engineers or engineers associated with the Structural Engineering industry, who wish to enhance their understanding in the design utilizing the wind loads derived from wind tunnel tests. It is also suitable for senior undergraduate and post-graduate students currently engaged in the study and/or research in Structural Engineering.

CPD Credit: The course is designed for 1 CPD day. A certificate of attendance will be available upon request.

Medium of Instruction: The medium of instruction will be in English.

Reference for Course:
A set of Lecture notes will be distributed.

Fee: HK\$900 including lecture note and two tea breaks. Places are limited to 100 for room size.

Further Information: For course content and technical information, please contact Professor C.W. Li (Tel. 2766 6043), the Course Speaker, Department of Civil and Structural Engineering, The Hong Kong Polytechnic University.

Venue: TU101, The Hong Kong Polytechnic University, Hung Hom, Kowloon.

Narrative Biography of Speakers:

Dr. John Holmes is Director, JDH Consulting, Australia. He was previously a Senior Lecturer at James Cook University, Townsville for seven years, at CSIRO, Divisions of Building Research, and Building, Construction and Engineering for fourteen years (reaching the level of Chief Research Scientist), and a Principal Research Fellow at Monash University for five years (all in Australia). In 1989, 2001, 2002 and 2005, respectively, he was a Visiting Professor at Texas Tech University, Louisiana State University, University of Western Ontario, Canada, and Texas Tech University (again). In 2003 and 2004 he was John P. Laborde Visiting Professor at Louisiana State University, Baton Rouge, Louisiana, U.S.A., where he studied the mechanics and aerodynamics of windborne debris in hurricanes.

He has been engaged in research, testing and consulting in wind loads and wind effects for more than 30 years. He was actively involved in the writing of Australian Standards AS1170.2-1989, AS/NZS1170.2:2002 (Wind loads) and AS3995-1994 (Design of steel lattice towers and masts), and is currently Chair of Sub-Committee BD006-02 of Standards Australia, responsible for the Australia/New Zealand Wind Actions Standard. He is the author or co-author of some 300 journal papers, conference presentations, and research and consulting reports. He is the author of: "*Wind Loading of Structures*", published by Spon Press of London in 2001, with the second edition published by Taylor and Francis in 2007, and "*A Guide to AS/NZS1170.2:2002 – Wind Actions*" published by Warren Publishing in 2005. He is a Editor-in-Chief of '*Wind and Structures*', an international journal published by Techno Press, Korea.

He has been a consultant for, or carried out collaborative research with, many companies or organisations. He was awarded a Fulbright Senior Fellowship to the United States in 1989, the Warren Medal by the Institution of Engineers in 1990, and a Senior Fellowship by the Japan Society for Promotion of Science in 1996. He is a Fellow of the Institution of Engineers, Australia, a Life Member of the Australasian Wind Engineering Society, a member of the American Association for Wind Engineering, an advisor to the Engineering Sciences Data Unit of London, U.K. and to the Technical Committee on Wind Loading of Malaysia. He was a consultant for the United Nations Development Program in India in 1994 and 1995, and has represented Australia at nine APEC Structural Loading and Wind Loading Workshops between 1996 and 2006.

He has also been involved in the determination of design wind loads for many major structures including : West Gate Bridge, Melbourne; Citycorp Building, New York; Stadium Australia, Sydney; My Thuan Bridge, Vietnam; Docklands Stadium, Melbourne; Baram Bridge, Malaysia; Macau Tower, China; Wembley Stadium, London; Chevron Redevelopment, Gold Coast, Australia; Woodside offshore platforms, Mauritania, West Africa; Woodside LNG Plant, Western Australia.

Professor C.W. Li is currently a professor in the Department of Civil & Structural Engineering, the Hong Kong Polytechnic University. His research interests include wind flow around structures, numerical wave prediction; wave-current-structure interaction; 3D modeling of fluid flow, water qualities and near field dispersion. He has published over 130 papers in International Journals, Conference Proceedings and Book Chapters. He is an associate editor of the Journal of Hydro-environment Research, Journal of Engineering Applications of Computational Engineering

Mechanics, and is an editorial board member of Journal of Hydroinformatics. He has been the Chairman of the International Association of Hydraulic Engineering and Research – Hong Kong Chapter (2006-2008). He obtained The President's Award for Outstanding Performance/ Achievement in Research and Scholarly Activities in 2000.

He is also an advisory consultant of projects on wind tunnel tests of high rise buildings, as well as physical and numerical modelling of hydraulic and coastal structures and processes. For the past ten years, he has secured research and consultancy funding of amount over HK\$15M.

Course Programme:

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| 08:45 - 09:00 | Registration |
| 09:00 - 09:45 | Hong Kong extreme winds and load factors |
| 09:45 – 10:30 | Basic structural dynamics & random vibration theory |
| 10:30 - 10:45 | <i>Tea break</i> |
| 10:45 - 11:30 | Cladding pressures & glass response |
| 11:30 – 12:15 | Internal pressures |
| 12:15 – 14:00 | <i>lunch</i> |
| 14:00 - 14:45 | Introduction to wind tunnel testing; sheltering effects and possible removal |
| 14:45 – 15:30 | Load combinations and the selection of load cases |
| 15:30 – 15:45 | <i>Tea break</i> |
| 15:45 – 17:15 | Monte Carlo simulation and wind direction effect |

Application Form

Course: - WIND LOAD DETERMINATION OF BUILDINGS IN HONG KONG (10 June 2009)

Fee: HK\$900 (includes course fees, course notes and refreshments).

Text: To be distributed by the speakers.

Name : Mr. / Ms. /Ir/Dr / Prof.

_____ In Chinese : _____
(in block letters, surname first) (Please use the same name as on your H.K. Identity Card)

Address: _____

_____ Mobile No. / Tel. No.:

Employer's Name
And Address : _____

Tel. No.:

Email: _____

Position Held : _____

Please send application form with cheque* to Miss Miya Lau, The Hong Kong Institute of Steel Construction c/o TU743 The Hong Kong Polytechnic University, Hung Hom, Kowloon, Hong Kong (Tel.: 852-3400-3965 , Fax: 852-2334-6389).

*Cheques should be crossed and made payable to **Hong Kong Institute of Steel Construction Limited**. fees are non-refundable. Places are limited; therefore, early application is strongly advised. **The closing date for application is 8th June 2009 (Monday).**