



Department of Civil and Environmental Engineering
The Hong Kong Polytechnic University



Structural Division

Seminar

Wind Engineering and Wind Tunnel Testing

Organized by

The Hong Kong Institute of Steel Construction

Sponsored by

Joint Structural Division, HKIE

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

on 10 Jan 2018

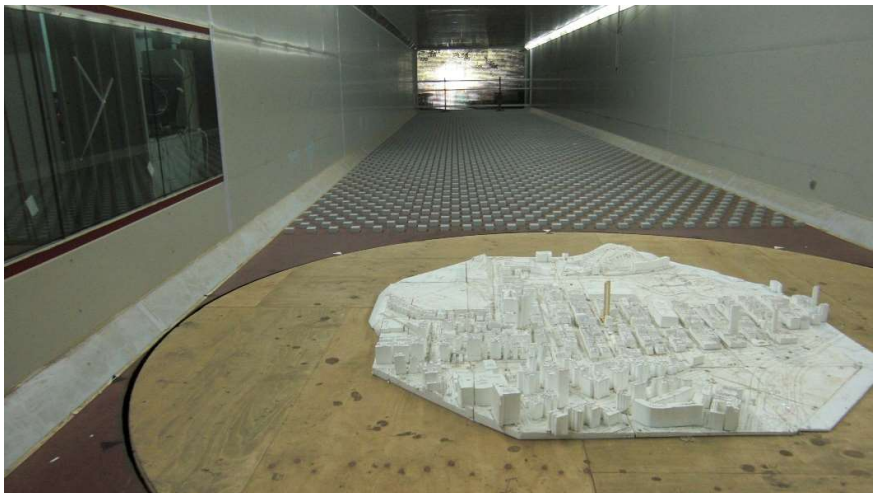
Date: 10 January 2018
Venue: N001, The Hong Kong Polytechnic University
Time: 8:45 am (registration) for 9:00 am to 12:30 pm for lecture and
 2:00pm to 5:00 pm for wind tunnel station visit

Scope and Objectives

Wind engineering is an important topic in construction and in building safety. The invasion of typhoon Hato showed that some structural components may be incapable of resisting high and strong wind. In Wind Codes some wind generated effects (conservative or non-conservative) are not covered. Wind tunnel tests are frequently employed in Hong Kong as an alternative of the use of Hong Kong Wind Code to obtain the design wind load. This course will provide engineers the details of wind tunnel tests and the methods of analysis of the test results.

Aims of this seminar :

- 1) To understand the nature of wind and its effects on structures
- 2) To recognize the capability, limitation and advantages of wind tunnel test.
- 3) To learn the know-how of using wind tunnel test results in the structural design of buildings.



Speakers

Prof. C.W. Li from The Hong Kong Polytechnic University

Prof. C. W. Li is a Professor in the Department of Civil and Environmental Engineering of The Hong Kong Polytechnic University. He obtained his BSc(Eng) and PhD degrees from the University of Hong Kong. He has over 25 years of research, consultancy and teaching experience in wind engineering and hydraulic engineering. He has managed and conducted numerous consultancy projects on wind engineering and hydraulic engineering for the government departments, consultants and contractors. He has published over 180 papers in international journals and conference proceedings. He is an Associate Editor of the Journal of Hydro-environment Research and the journal Engineering Applications of Computational Fluid Mechanics. He received the President's Award for Outstanding Performance/Achievement in Research and Scholarly Activities in 2000. Currently he is participating in the revision of the Hong Kong Wind Code 2004.

Ir Dr. Johnny Yu from RED Wind Engineering Consultants Limited

Ir Dr. Johnny Yu is currently a director of RED Consultants Limited, which is a local wind engineering consulting company undertaking wind tunnel tests for developments in Hong Kong and Macau. He obtained his B.Eng. and Ph.D. degrees in Civil Engineering from the Hong Kong Polytechnic University and his M.Sc. degree in Applied Mathematics from the City University of Hong Kong. He worked in AECOM in hydraulic stream from 1998 to 2004 and acquired his civil engineering membership in 2002. After left AECOM, he established RED Consultants Limited and worked as a wind engineering specialist since then. Ir Dr. Johnny Yu has more than 10 years in the field of wind engineering and has undertaken more than 200 wind tunnel test projects in Hong Kong and Macau SAR in last decade.

| Time | Program |
|----------------------------------|--|
| 8:45 am | Registration |
| Lecture 1 9:00 am – 9:45 am | Design wind speed, wind speed profile and wind pressure |
| Lecture 2 9:45 am – 10:30 am | Shape factor, building vibration and mitigation |
| 10:30 am – 11:00 am | Tea break |
| Lecture 3 11:00 am – 11:45 am | Wind tunnel testing details |
| Lecture 4 11:45 am – 12:30 pm | Post-processing of wind tunnel testing results: wind directional effect and load combination |
| 12:30 pm – 2:00 pm | Lunch |
| 2:00 pm – 5:00 pm | Site visit to two wind tunnels in Sheung Shui, N.T Coaches will be arranged. |

Official Language

English will be the official language.

Fees & Registration

The registration fee includes a copy of lecture note

Regular Registration: **HK\$ 900** each for HKISC/ HKIE Members; **HK\$ 1,200** each for non HKISC/ HKIE Members.

Group Registration: **HK\$ 900** each for group registration of at least 5 people

CPD Certificates

This seminar is recommended for **ONE** CPD day. An attendance certificate will be issued.



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REGISTRATION FORM

(To be replied on or before 1st January 2018)

Please follow the 2 steps registration procedure:

1. Fax the completed registration form to *Mr. Tommy Li* (Fax: 852-2334 6389) for preliminary registration.
2. Post the completed registration form together with a crossed cheque payable to **Hong Kong Institute of Steel Construction Limited** to Mr. Tommy LI, at:

Hong Kong Institute of Steel Construction / HKISC
c/o Room ZS972, Department of Civil and Environmental Engineering,
The Hong Kong Polytechnic University, Hunghom, Kowloon, Hong Kong
on or before 5th January 2018.

To: Mr. Tommy Li, HKISC

Fax: 852- 2334 6389

A. Personal Details:

| Title | Name in full (Block Letter) | Name of Company | Tel. (or Fax) | E-mail address |
|-------|-----------------------------|-----------------|---------------|----------------|
| 1. | | | | |
| 2. | | | | |
| 3. | | | | |
| 4. | | | | |
| 5. | | | | |

Postal Address
(for official receipt): _____

B. Registration Details:

| Item | Registration Fee | Total no. of registration | Sub-total |
|--|-------------------|---------------------------|--------------|
| 1. Regular registration (Member*price) | HK\$ 900 each x | _____ person(s) | = HK\$ _____ |
| 2. Regular registration (Non-member*price) | HK\$ 1,200 each x | _____ person(s) | = HK\$ _____ |
| 3. Group registration (at least <u>5</u> people) | HK\$ 900 each x | _____ person(s) | = HK\$ _____ |
| Total amount: | | | HK\$ |

Note: The registration fee includes a copy of proceedings, a copy of CPD certificate and 2 tea refreshments (lunch not included)

**HKIE or HKISC member*

I enclosed a crossed cheque (cheque no. _____) with the sum of HK\$ _____ for the registration fee of the captioned Seminar.

Signature: _____ Date: _____

CPD Certificates of Attendance Please tick the appropriate box to indicate your choice:

Yes, I/ we would like to have CPD certificate(s). Not request for certificate(s).