



Department of Civil & Environmental Engineering  
The Hong Kong Polytechnic University



The Hong Kong Institution of Engineers  
Joint Structural Division

**Half-day Symposium**  
**DESIGN OF COMPOSITE STRUCTURES**  
**TOWARDS “CARBON ZERO CONSTRUCTION”**

Organized by  
*Young Members Group, The Hong Kong Institute of Steel Construction*  
*Department of Civil and Environmental Engineering, The Hong Kong Polytechnic University*

Sponsored by  
*Joint Structural Division, The Hong Kong Institution of Engineers (To be confirmed)*

**Friday, 3 May 2013**

<b>Date:</b>	Friday, 3 May 2013
<b>Venue:</b>	Room BC409, The Hong Kong Polytechnic University, Hung Hom, Kowloon
<b>Time:</b>	1:45 am (registration) for 2:00 pm to 5:30 pm

**Scope and Objectives**

The UK Government has set an ambitious and legally binding target to reduce national greenhouse gas emissions by at least 80% by 2050 with an intermediate target of a 34% reduction by 2020 (against a 1990 baseline). The operation of buildings currently accounts for around half of the UK's greenhouse gas emissions and therefore significant improvement in new and existing building performance is required if these targets are to be met. It is against this background that the UK steel construction sector is supporting the Government and the construction industry by funding research and providing guidance in this important and challenging area through the Target Zero project. The first half of the symposium will describe the programme of work of the Target Zero project and gives examples of comparative embodied carbon assessment of the commercial buildings.

In addition, much of the environmental impact from the construction industry is associated with consumption of resources and generation of waste. The construction industry in Europe consumes over 70,000 million tonnes of materials each year, and generates over 250 million tonnes of waste. Reducing waste is a priority for all European Governments. Composite flooring formed by connecting the concrete slabs to the supporting steel beams has been widely used for many years throughout the world. Although steel and concrete composite construction is well established as a cost-effective arrangement for floor systems in multi-storey steel frame building structures, the shear connectors are welded through the steel decking and cast into the concrete; which makes deconstruction and reuse of the steel components almost impossible. The second part of the symposium describes the tests and development of the demountable shear connector and assesses its potential and suitability in term of replacing the traditional welded headed shear studs.

**Speaker**

Professor Dennis Lam is the Chair of Structural Engineering in the School of Engineering, Design & Technology and Director of Bradford Centre for Sustainable Environments at the University of Bradford, UK and was formerly Chief Structural Engineer for the City of Wakefield. He is a Chartered Engineer, Fellow of the Institution of Structural Engineers and Member of the Institution of Civil Engineers. Before joining the academia, he has spent more than ten years in engineering practices. He is currently a Visiting Professor at the Hong Kong Polytechnic University, the President of the Association for International Cooperation and Research in Steel - Concrete Composite Structures (ASCCS) and Chair of the Research Panel for the Institution of Structural Engineers in the UK. He is the European Editor-in-Chief for Steel & Composite Structures and serves on the editorial boards for five other international journals in structural engineering and is a member of the British Standard Institute Committee, B525 and European Standard Committee, CEN/T250/SC4 responsible for the BS5950 and Eurocode 4.

**Official Language**

English will be the official language.

**Fees & Registration**

The registration fee includes a copy of lecture note

Regular Registration: **HK\$ 600** each for HKISC/ HKIE Members; **HK\$ 800** each for non HKISC/ HKIE Members.

Group Registration: **HK\$ 600** each for group registration of at least 5 people

A tea break will be included.

**CPD Certificates**

This seminar is recommended for **HALF-DAY** CPD. An attendance certificate will be issued.

Please send the completed registration form with registration fee to The Hong Kong Institute of Steel Construction, c/o TU712, Department of Civil and Environmental Engineering, The Hong Kong Polytechnic University, Hung Hom, Kowloon **by 29 April 2013** (Fax No.: 852-2334 6389 / Email: [ymsg@hkisc.org](mailto:ymsg@hkisc.org)). You can download this form on HKISC web (<http://www.hkisc.org>). For technical information, please contact Dr Alfred FONG at **2268 3244**



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香港  
鋼結構學會

Hong Kong Institute of  
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**REGISTRATION FORM**

*(To be replied on or before 2<sup>nd</sup> April 2013)*

Please follow the 2 steps registration procedure:

1. Email the completed registration form to Dr Alfred FONG (ymg@hkisc.org) for preliminary registration.
2. Post the completed registration form together with a crossed cheque payable to **Hong Kong Institute of Steel Construction Limited** to “The Hong Kong Institute of Steel Construction” at Room TU712, Department of Civil and Environmental Engineering, The Hong Kong Polytechnic University, Hunghom, Kowloon, Hong Kong

on or before **29 April 2013**.

**To: The Hong Kong Institute of Steel Construction**

**Fax: 852- 2334 6389**

**A. Personal Details:**

Title	Name in full (Block Letter)	Name of Company	Tel. (or Fax)	E-mail address	Institution/ Membership No.
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\$ 600 each x	_____ person(s)	= HK\$ _____
2. Regular registration (Non-member*price)	HK\$ 800 each x	_____ person(s)	= HK\$ _____
3. Group registration (at least <u>5</u> people)	HK\$ 600 each x	_____ person(s)	= HK\$ _____
<b>Total amount:</b>			<b>HK\$</b>

*Note: The registration fee includes a copy of lecture note, a copy of CPD certificate and tea refreshment*

*\*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).



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<b>Time</b>	<b>Program</b>
<b>1:45 pm</b>	Registration
<b>Lecture 1 2:00 pm</b>	<b>A comparative embodied carbon assessment of commercial buildings</b>
<b>3:00 pm</b>	Tea Break
<b>Lecture 2 3:30pm</b>	<b>Demountable shear connectors for whole life-cycle composite structures</b>
<b>5:00 pm</b>	Discussion
<b>5:30 pm</b>	End of seminar