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

Date: Friday, 3 May 2013
Venue: Room BC409, The Hong Kong Polytechnic University, Hunghom, Kowloon
Time: 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: ymg@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.
# Half-day Symposium

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<tbody>
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## REGISTRATION FORM

*(To be replied on or before 29th 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:

<table>
<thead>
<tr>
<th>Title</th>
<th>Name in full (Block Letter)</th>
<th>Name of Company</th>
<th>Tel. (or Fax)</th>
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Postal Address  
(for official receipt): ________________________________

### B. Registration Details:

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<tr>
<th>Item</th>
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<tbody>
<tr>
<td>1. Regular registration (Member*price)</td>
<td>HK$ 600 each x</td>
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<td>2. Regular registration (Non-member*price)</td>
<td>HK$ 800 each x</td>
<td>_____ person(s)</td>
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<td>_____ person(s)</td>
<td>= HK$ ________</td>
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**Total amount:** HK$

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