

**International Conference on
Engineering Research and Practice for Steel Construction
5 to 7 September 2018, Hong Kong**

**International Conference on Engineering Research and Practice
for Steel Construction 2018**

2018.09.05-07

The International Conference on Engineering Research and Practice for Steel Construction 2018 (ICSC2018) was the first international conference organized by the Chinese National Engineering Research Centre for Steel Construction (Hong Kong Branch) (CNERC). It was successfully held from 5 to 7 September 2018 in Hong Kong with over 180 delegates from 15 countries attended. Moreover, a total of 10 world-renowned researchers and engineers presented their recent research works and construction projects during their keynote lectures, and 20 sessions including 13 special sessions with over 100 technical papers were presented over the three-day event.

The ICSC2018 gathered support from the Development Bureau of the Government of Hong Kong SAR, Architectural Services Department, Building Department, Civil Engineering and Development Department, Construction Industry Council, Urban Renewal Authority and The Hong Kong Institution of Engineers as well as a total of 11 sponsors in Hong Kong and the Mainland China.

The ICSC2018 aims to provide a technical platform for effective exchange on modern steel construction technology among researchers and engineers. Recent research works and construction projects were presented in the Conference which was also a valuable networking opportunity among conference delegates.



Over 180 delegates from 15 countries attended the ICSC2018 Conference.

During the Opening Ceremony, Prof. K. F. Chung had given a Welcoming Speech, and Ir C. K. Hon being the Guest of Honor had officiated the Opening of the Conference.



Welcoming Speech by Prof. K. F. Chung.



Prof. K. F. Chung, Chairman of ICSC2018, and Director of CNERC (left), and Ir C. K. Hon, Permanent Secretary of Development Bureau of the Government of the HKSAR, Guest of Honour of ICSC2018 (right).

The following guests had attended the Opening Ceremony held on 5 September 2018:

- Ir C. K. HON, JP Permanent Secretary for Development (Works),
Development Bureau of the Government of Hong Kong SAR, China
- Mr. K. K. CHAN Construction Industry Council
- Ir Y. K. CHENG Institution of Structural Engineers, U. K.
- Prof. William LAM Hong Kong Polytechnic University
- Ir C. C. CHAN Construction Industry Council
- Ir Terence LAM Civil Engineering and Development Department
- Ir Humphrey HO Buildings Department
- Ir Albert CHENG Construction Industry Council
- Ir Alex KWAN Hong Kong Airport Authority
- Ir Thomas HUI Development Bureau (Works)
- Ir C. K. CHAN The Hong Kong Institution of Engineers
- Ir Ben LEUNG The Hong Kong Institution of Engineers
- Mr. Y. K. PANG Hong Kong Constructional Metal Structures Association
- Dr. Paul LAM City University of Hong Kong
- Dr. Michael LEUNG Hong Kong Polytechnic University
- Mr. S. K. POON China State Construction International Holdings Limited
- Mr. Eric KWONG AluHouse Company Limited
- Mr. C. H. WU CCM – Changzhou Changhong Mould Limited
- Dr. Jeffrey LAM Nano and Advanced Materials Institute Limited
- Mr. Matthew LAI Wo Lee Steel Co., Ltd.
- Mr. Patrick YAN Yau Sang Galvanizing (Hot-Dip) Co., Ltd.

The following prominent researchers and engineers had presented in the Keynote Lectures during the Conference:

- Prof. David A. Nethercot, Imperial College London, United Kingdom
- Prof. Yozo Fujino, Yokohama National University, Japan
- Prof. Sritawat Kitipornchai, University of Queensland, Australia
- Prof. Ahmed Elghazouli, Imperial College London, United Kingdom
- Prof. Richard Liew, National University of Singapore, Singapore
- Prof. G. Q. Li, Tongji University, China
- Prof. L. H. Han, Tsinghua University, China
- Prof. S. P. Chiew, Singapore Institute of Technology, Singapore
- Prof. Richard Stroetmann, Technische Universität Dresden, Germany
- Dr. Robin Sham, AECOM, Hong Kong

Keynote Lectures:



Prof. David A. Nethercot, Imperial College London and The Hong Kong Polytechnic University presented on “Understanding and designing to resist the progressive collapse of steel frame buildings”.



Prof. Yozo Fujino, Yokohama National University presented on “Technological developments of steel bridges and their structural monitoring in Japan – a review”.



Prof. S. P. Chiew, Singapore Institute of Technology presented on “Design of high strength steel reinforced concrete columns”.



Prof. G. Q. Li, Tongji University presented on “Fire safety of large space steel buildings”.



Prof. L. H. Han, Tsinghua University presented on “Behaviour and design calculations of concrete-filled stainless steel tubular columns”.



Prof. Ahmed Elghazouli, Imperial College London presented on “Inelastic seismic demands in steel framed structures”.



Prof. Richard Stroetmann, Technische Universität Dresden presented on “Mechanical properties and a new design approach for welded joints at high strength steels”.



Prof. Sritawat Kitipornchai, University of Queensland presented on “FRP composites in steel structures”.



Dr. Robin Sham, AECOM presented on “A seismic resilient and scour tolerant long river crossing”.



Prof. Richard Liew, National University of Singapore presented on “Prefabricated prefinished volumetric construction of high-rise buildings”.

Special Sessions:

- **Effective Use of High Strength Steel on Construction I**
Professor Kwok-Fai CHUNG, *The Hong Kong Polytechnic University, Hong Kong*
- **Steel & Composite Structures I**
Professor Su-Mei ZHANG, *Harbin Institute of Technology, China*
- **Cold-formed Steel Structures**
Professor Ben YOUNG, *The University of Hong Kong, Hong Kong*
- **New Process & Forming Effects on Cold-formed Steel Members**
Professor Fei HAN, *North China University of Technology, China*
- **Concrete Materials & Structures**
Dr. Johnny HO, *The University of Queensland, Australia*
- **Steel Metallurgy**
Dr. Ming-Xin HUANG, *The University of Hong Kong, Hong Kong*
- **Effective Use of High Strength Steel on Construction II**
Dr. Tak-Ming CHAN, *The Hong Kong Polytechnic University, Hong Kong*
- **Concrete-filled Steel Tubular Structures**
Dr. Wei LI, *Tsinghua University, China*
- **Seismic Protection to Steel Structures**
Dr. Xu-Chuan LIN, *Institute of Engineering Mechanics, China*
- **Steel & Composite Structures II**
Dr. Zhen-Yu HUANG, *Shenzhen University, China*
- **Bimetallic Steel Structures**
Dr. Hui-Yong BAN, *Tsinghua University, China*
- **High Strength Steel & Composite Structures**
Dr. Yan-Bo WANG, *Tongji University, China*
- **Concrete-filled High Strength Steel Structures**
Dr. May SU, *The University of Manchester, United Kingdom*

In addition to the Conference Programme on Day 2, the CNERC held its 2nd International Advisory Committee Meeting on 6 September 2018.



International Advisory Committee Meeting of CNERC.

In the evening, the ICSC2018 held its Conference Dinner for all the conference delegates and guests at the Star Room of the Cordis Hotel.



All the conference delegates had an enjoyable and fruitful evening at the Conference Dinner.



The Organizing Committee of ICSC2018 made a formal toasting to all the guests at the Conference Dinner.



China Construction Steel Structure Corp. Ltd. sponsored the ICSC2018 Conference Dinner.



Mr. Z. M. Chen, China Construction Steel Structure Corp. Ltd. presented a speech as the Sponsor of the Conference Dinner.

During the Conference Dinner, two Awards namely Best Paper Awards and Young Researcher Awards were presented. The Best Paper Award on Engineering Research for Steel Construction was given to research paper that has extraordinary research achievement and breakthrough in material properties as well as design and construction methods.



Dr. Zhenyu HUANG, Shenzhen University received a Best Paper Award on Engineering Research for Steel Construction, and the title of his paper is “Lightweight Steel-concrete Composite Structures—Recent Innovations”.

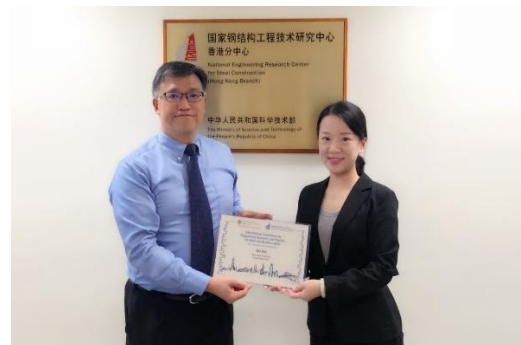


Dr. Xu-Chuan LIN, Institute of Engineering Mechanics, China Earthquake Administration received a Best Paper Award on Engineering Research for Steel Construction, and the title of his paper is “Seismic Behavior of Damage-controlled Fuses for High Strength Steel Structures”.

As for the Young Researcher Awards, the objective of to reward the achievement of our younger research generation age under 35, as well as to encourage their continuous efforts towards our engineering community.



Dr. Huiyong Ban, Tsinghua University received a Young Researcher Award on Engineering Research for Steel Construction, and the title of his paper is “An Innovative High Performance Steel Product for Structural Engineering: Bi-metallic Steel”.



Dr. Fei XU of the Hong Kong Polytechnic University received a Young Researcher Award on Engineering Research for Steel Construction, and the title of her paper is “Fracture Prediction of RHS and SHS Braces subjected to Extremely Low Cyclic Fatigue”.

Appendices:

Acknowledgements

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Programme on Day 1

5 September (Wednesday) DAY 1		
8:00am	Registration	Ballroom Foyer, Level 7
Ballrooms I & II, Level 7		
Opening Ceremony 9:00am	Welcome Address Professor Kwok-Fai CHUNG <i>Chairman, Conference Organising Committee</i> <i>Director, Chinese National Engineering Research Centre for Steel Construction (Hong Kong Branch)</i>	
	Opening Address Ir Chi-Keung HON, GBS, JP <i>Permanent Secretary for Development (Works), Development Bureau, the Government of the HKSAR</i>	
Keynote Lectures chaired by Professor Sritawat KITIPORNCHAI		Ballrooms I & II, Level 7
Keynote Lecture 1 9:30am	Understanding and designing to resist progressive collapse of steel frame buildings Professor David A. NETHERCOT <i>Imperial College London, United Kingdom</i>	
Keynote Lecture 2 10:00am	Technological developments of steel bridges and their structural monitoring in Japan – a review Professor Yozo FUJINO <i>Yokohama National University, Japan</i>	
10:30am	Coffee Break	Ballroom Foyer, Level 7
Keynote Lectures chaired by Professor Ahmed Y. ELGHAZOULI		Ballrooms I & II, Level 7
Keynote Lecture 3 11:00am	Design of high strength steel reinforced concrete columns Professor Sing-Ping CHIEW <i>Singapore Institute of Technology, Singapore</i>	
Keynote Lecture 4 11:30pm	Fire safety of large space steel buildings Professor Guo-Qiang LI <i>Tongji University, China</i>	
12:00pm	Lunch Sponsored by AluHouse	Star Room, Level 42
	Parallel Session 1A Ballrooms I & II, Level 7	Parallel Session 1B Shanghai Room I, Level 8
1:30pm	<u>Special Session</u> Effective Use of High Strength Steel on Construction I Professor Kwok-Fai CHUNG <i>The Hong Kong Polytechnic University, Hong Kong</i>	<u>Special Session</u> Concrete Materials & Structures Dr. Johnny HO <i>The University of Queensland, Australia</i>
3:00pm	Coffee Break	Ballroom Foyer, Level 7
	Parallel Session 2A Ballrooms I & II, Level 7	Parallel Session 2B Shanghai Room I, Level 8
3:30pm 5:00pm	<u>Special Session</u> Effective Use of High Strength Steel on Construction II Dr. Tak-Ming CHAN <i>The Hong Kong Polytechnic University, Hong Kong</i>	<u>Special Session</u> Concrete-filled High Strength Steel Structures Dr. May SU <i>The University of Manchester, United Kingdom</i>

Programme on Day 2

6 September (Thursday) DAY 2			
8:30am	Registration		Ballroom Foyer, Level 7
Keynote Lectures chaired by Professor Richard J. Y. LIEW			Ballrooms I & II, Level 7
Keynote Lecture 5 9:00am	Behaviour and design of concrete-filled stainless steel tubular columns Professor Lin-Hai HAN <i>Tsinghua University, China</i>		
Keynote Lecture 6 9:30am	Inelastic seismic demands in steel framed structures Professor Ahmed Y. ELGHAZOULI <i>Imperial College London, United Kingdom</i>		
Keynote Lecture 7 10:00am	Mechanical properties and a new design approach for welded joints at high strength steels Professor Richard M. STROETMANN <i>Technische Universität Dresden, Germany</i>		
10:30am	Coffee Break Ballroom Foyer, Level 7		
	Parallel Session 3A Ballrooms I & II, Level 7	Parallel Session 3B Ballroom III, Level 7	Parallel Session 3C Shanghai Room I, Level 8
11:00am	Analysis & Design I Professor Tommy CHAN <i>The Queensland University of Technology, Australia</i>	Cold-formed Steel Construction I Professor Sing-Ping CHIEW <i>Singapore Institute of Technology, Singapore</i>	Steel Structures Dr. Paul H. F. LAM <i>The City University of Hong Kong, Hong Kong</i>
12:00pm	Lunch The Place, Lobby Level		
	Parallel Session 4A Ballrooms I & II, Level 7	Parallel Session 4B Ballroom III, Level 7	Reserved
1:30pm	<u>Special Session</u> Bimetallic Steel Structures Dr. Hui-Yong BAN <i>Tsinghua University, China</i>	<u>Special Session</u> Steel & Composite Structures I Professor Su-Mei ZHANG <i>Harbin Institute of Technology, China</i>	
3:00pm	Coffee Break Ballroom Foyer, Level 7		
	Parallel Session 5A Ballrooms I & II, Level 7	Parallel Session 5B Ballroom III, Level 7	Parallel Session 5C Shanghai Room I, Level 8
3:30pm	<u>Special Session</u> Cold-formed Steel Structures Professor Ben YOUNG <i>The University of Hong Kong, Hong Kong</i>	<u>Special Session</u> New Process & Forming Effects on Cold-formed Steel Members Professor Fei HAN <i>North China University of Technology, China</i>	Composite Structures Professor Tommy CHAN <i>The Queensland University of Technology, Australia</i>
5:00pm			
7:00 – 10:00pm	Conference Dinner Sponsored by China Construction Steel Structure Corp. Ltd.		Star Room, Level 42

Programme on Day 3

7 September (Friday) DAY 3			
8:30am	Registration		Ballroom Foyer, Level 7
Keynote Lectures chaired by Professor Yozo FUJINO			Ballrooms I & II, Level 7
Keynote Lecture 8 9:00am	FRP composites in steel structures Professor Sritawat KITIPORNCHAI <i>The University of Queensland, Australia</i>		
Keynote Lecture 9 9:30am	A seismic resilient and scour tolerant long river crossing Dr. S. H. Robin SHAM <i>AECOM, Hong Kong</i>		
Keynote Lecture 10 10:00am	Prefabricated prefinished volumetric construction of high-rise buildings Professor Richard J. Y. LIEW <i>National University of Singapore, Singapore</i>		
10:30am	Coffee Break		Ballroom Foyer, Level 7
	Parallel Session 6A Ballrooms I & II, Level 7	Parallel Session 6B Ballroom III, Level 7	Parallel Session 6C Shanghai Room I, Level 8
11:00am	Analysis & Design II Professor Chun-Man CHAN <i>The Hong Kong University of Science and Technology, Hong Kong</i>	Cold-formed Steel Construction II Dr. Tak-Ming CHAN <i>The Hong Kong Polytechnic University, Hong Kong</i>	Connections & Fire Engineering Dr. Fa-Cheng WANG <i>Tsinghua University, China</i>
12:00pm	Lunch		Alibi, Level 5
	Parallel Session 7A Ballrooms I & II, Level 7	Parallel Session 7B Ballroom III, Level 7	Parallel Session 7C Shanghai Room I, Level 8
1:30pm	<u>Special Session</u> Steel Metallurgy Dr. Ming-Xin HUANG <i>The University of Hong Kong, Hong Kong</i>	<u>Special Session</u> High Strength Steel & Composite Structures Dr. Yan-Bo WANG <i>Tongji University, China</i>	<u>Special Session</u> Seismic Protection to Steel Structures Dr. Xu-Chuan LIN <i>Institute of Engineering Mechanics, China</i>
3:00pm	Coffee Break		Ballroom Foyer, Level 7
	Parallel Session 8A Ballrooms I & II, Level 7	Parallel Session 8B Ballroom III, Level 7	Reserved
3:30pm 5:00pm	<u>Special Session</u> Concrete-filled Steel Tubular Structures Dr. Wei LI <i>Tsinghua University, China</i>	<u>Special Session</u> Steel & Composite Structures II Dr. Zhen-Yu HUANG <i>Shenzhen University, China</i>	

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The Hong Kong Polytechnic University

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