

**HKIE Structural Division and
HKIE/IStructE Joint Division**

ANNUAL REPORT 2016/2017



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COMMITTEE MEMBERS

JSD Committee Members 2016/2017

Ir LEUNG Kwok-tung, JP
Chairman
Architectural Services Department

Ir Ken NG Kin-shing
Immediate Past Chairman
Buildings Department

Ir Edward CHAN Sai-cheong
Deputy Chairman
AECOM Asia Company Limited

Ir TSE Kam-leung
Hon Secretary
Architectural Services Department

Ir CHAN Chi-kong
Hon Treasurer
Arcadis

Ir Ben TSE Wai-keung
Committee Member
BEN TSE & Associates Limited

Ir Benny LAI Siu-lun
Committee Member
Siu Yin Wai & Associates Limited

Ir Paul LEE Kai-hung
Committee Member
Hsin Chong Group Holdings Limited

Ir Prof Andrew LEUNG Yee-tak
Committee Member

Ir LAM King-kong
Committee Member
Housing Department

Ir LUI Yuen-tat
Committee Member
Gammon Construction Limited

Ir Jacky CHIONG Kam-yueng
Committee Member
Buildings Department

Ir Prof Ben YOUNG
Committee Member
The University of Hong Kong

Ir Prof KUANG Jun-shang
Committee Member
Hong Kong University of Science and Technology

Ir Paul TSANG Sau-chung
Committee Member
Arup

Ir Kenneth CHAN Wai-ye
Committee Member
Highways Department

Ir Prof LO Sai-huen
Committee Member
The University of Hong Kong

Ir Jenny LAU Ching-ling
Committee Member
Architectural Services Department

Ir CHAN Siu-tack
PAC Representative

Ir Prof Paul PANG Tat-choi
Hong Kong Representative of IStructE

Ir LAU Chi-kin
IStructE Council Member
Sun Hung Kai Properties Limited

Ir Martin TSOI Wai-tong
Ex-officio Member (Council Member (Division))
Housing Department

Ir Prof CHAN Siu-lai
Ex-officio Member (Discipline Representative)
The Hong Kong Polytechnic University

Mr Simon PANG Hin-lam
Ex-officio Member (AMC Representative)
AECOM Asia Company Limited

Mr Johnny SHING Wai-lam
Ex-officio Member (SSC Representative)
The Hong Kong and China Gas Company Limited

Ms Emily YU Hay-ting
Ex-officio Member (YMC Representative)
Atrins China Limited

Ir Thomas WONG Kam-chuen
Co-opted Member
YSK2 Engineering Company Limited

Ir Dr Simon WONG Ho-fai
Co-opted Member
Technological and Higher Education Institute of Hong Kong

Ir Dr Eddie LAM Siu-shu
Observer
The Hong Kong Polytechnic University

Ir Albert LEUNG Wing-keung
Observer
Jacobs China Limited

Ir Kevin TANG
Observer
Greg Wong & Associates Limited

CHAIRMAN'S REPORT

It is indeed my greatest honour to be the 38th Chairman of the HKIE Structural Division and Chairman of the Joint HKIE/IStructE Division (JSD) for Session 2016/2017. Since becoming the Chairman, I am extremely excited with the work of JSD. Thanks to the collective efforts of the Committee Members, the JSD has achieved another fruitful year, and I would like to briefly report at below.



Membership

As of April 2017, the Structural Division has a membership of 6,301. Of which, 294 are Fellow Member, and 4,389 are Corporate Member.

Committee Major Activities

With the concerted effort of Committee Members, the JSD has organized over 30 activities in this session including:

- Technical meetings, seminars and site visits covering a wide range of topics
- Annual Dinner
- Structural Excellence Award
- Annual Seminar
- Annual Visit

Major Events

● **Annual Dinner 2016** was successfully held on 6 October 2016 at Holiday Inn Golden Miles Hong Kong, with a full house of over 450 members and guests. Mr. Paul CHAN Mo Po, GBS, MH, JP, Secretary for Development of the HKSAR Government was the Guest of Honour of the event, sharing his insight on the work of structural engineers in Hong Kong.

● **Structural Excellence Award 2017**, with the aim to promote excellence in structural engineering and achievement by structural engineers, was conducted in March 2017. Entries of the Award are grouped into two separate groups: Project Award and R&D Award. The Project Award aims to promote excellence in structural engineering demonstrated through the design and construction of buildings / infrastructures, whilst the R&D Award aims to honour academia's contribution to the research and application of structural engineering in buildings / infrastructures. The Judging Panel assessed each submission based on the submitted documents and presentations by the participants. The award winners will be announced by the Chairman of the Judging Panel, Ir LEUNG Kwok Tung, JP, at the Division Annual General Meeting on 12 May 2017.

● **Annual Visit 2017** to Singapore was held from 3 to 6 March 2017. We had visited the Department of Civil Engineering of National University of Singapore, the Sports Hub, an automated precast yard and construction sites with wide adoption of prefabrication. During the visit, we shared and exchanged views on construction productivity issues with experts in Singapore where prefabrication, integrated design and modular construction has been well developed, and learned the latest development in prefabrication technologies in enhancing the productivity of building construction, which are relevant to the construction industry in Hong Kong in facing the challenge of an acute manpower shortage.

● **Annual Seminar 2017** was held on 23 February 2017 with the theme "Green Structures and Construction". We were most delighted to have Mr. WONG Kam Sing, GBS, JP, Secretary for the Environment of the HKSAR Government as our Guest of Honour and delivered an opening address at this major annual event. Distinguished overseas and local speakers from academia to prominent practicing professionals had shared their insights, experience and innovative ideas in both research and application of green structural engineering, and provided inspiring examples to enhance the sustainability in building design and construction.

Inspire the Young

On 16 July 2016, the Structural Engineering Competition for Youth – Paper Frame Structure Challenge (紙做“易拉架”) co-organized by the JSD and Education Bureau of the HKSAR Government was held in The Polytechnic University of Hong Kong. This is the second competition preceded by the Paper Tower Challenge last year to inspire the youth to become elite engineers in the future by developing their analytical and communication skills and acquiring engineering knowledge through building and testing a paper frame structure. Each team was given 2.5 hours to build a frame structure of height 1.3 m using tapes and recycled papers. Each frame structure was subjected to an increasing horizontal force until collapse. The judging criteria included strength, lightness, aesthetic and innovation. The competition was a great success in which 22 teams from 15 secondary schools participated.

Career talks have also been conducted at local universities to introduce our profession to undergraduate students at the beginning of the next academic year. Also, a seminar on "Young or Ready Series: A Route to become a Professional Structural Engineer" was held on 26 September 2016 to share with engineering graduates and young members on the path leading to a professional qualification, training focus, preparation for professional assessment and continuous professional development through a practical approach.

Continuous Professional Development

In addition to the published handbooks by JSD (i.e. Wind Loading Handbook, Concrete Code Handbook, Handbook to Code of Practice for Demolition of Building, Precast Concrete Construction Handbook, Handbook to the Code of Practice for Foundations), another handbook for the Code of Practice for Structural Use of Steel is being prepared and will be issued soon. We hope our members will find these handbooks helpful for their daily works and professional development as well.

We have organized over 20 technical meetings, seminars and site visits to help support members on continuous professional development. In addition to those organized by our own, we collaborated with external institutions and bodies in conducting seminars, workshops, conferences and technical visits for professional development, and through these activities we have built stronger links with external parties for promoting our profession.

Serving the Community

We have active participation in serving the community. Members are nominated to various Government committees and panels with an aim to render our professional advice to the Government in different aspects and at various stages of policy formulation, including the APSEC Discussion Forum of the Buildings Department, various standing technical committees on the drafting / review of local codes of practice of the Buildings Department, Appeal Board Panel of the Amusement Rides (Safety) Ordinance of the Home Affairs Bureau, etc. Moreover, Committee Members play an important role as experts in the accreditation of university programmes, training schemes, and the assessment of application for registration as Registered Professional Engineer under the Engineers Registration Board.

CHAIRMAN'S REPORT

The written examination of the HKIE Structural Examination was held on 2 December 2016 with 433 candidates. To help candidates prepare the examination, a seminar was held on 22 October 2016. The next professional interview will be held in June and July 2017. Candidates have to pass the Structural Examination before admission to Corporate Membership under the Structural Discipline of HKIE.

In response to the roof collapse incident at the City University of Hong Kong, a press conference chaired by Ir CHAN Chi Chiu, President for Session 2015/2016, and joined by JSD's representatives was organised on 30 May 2016 at the HKIE Headquarters to express professional views on the subject and address the concerns of the public and answered enquiries from the media. A talk on green roof was also organised by the JSD on 11 June 2016. Over 150 participants from the public, schools and media attended. The talk provided a useful platform for promoting public awareness of structural safety in buildings and the proper procedures for green roof construction and structural assessment. In addition, a 3-month volunteer advisory service from 5 July 2016 to 4 October 2016 was offered by the JSD to schools and charitable organizations on green roof structural assessment.

IStructE Matters

Mr. Alan CROSSMAN, President for Session 2016, and Mr. Martin POWELL, Chief Executive of the IStructE, came to Hong Kong in mid November 2016 for the Presidential Visit. At the Presidential Address, Mr. CROSSMAN shared his wonderful insight on the subject of "Art of the Possible" to a full house of audience followed by presentation of certificates to newly elected Fellow Members and Chartered Members. They also visited the HKIE Headquarters, AECOM and Architectural Services Department of the HKSAR Government, and met students and staffs of Department of Civil and Environmental Engineering of the Hong Kong University of Science and Technology.

Two Chartered Membership Examinations were held in Hong Kong in July 2016 and January 2017 with 109 and 167 candidates taking the examinations respectively.

Appreciation

The JSD has now put in place various activities for parties ranging from practicing engineers, graduated engineers, university students to Secondary School students. These are thanks to the collective efforts from past Chairpersons and Committee Members, and of course members' participation. I would like to take this opportunity to thank all Committee Members of this session for their invaluable supports to the JSD in achieving another fruitful year.

The JSD will continue to promote the advancement of structural engineering, and to facilitate exchange of professional knowledge for members. I look forward to your active participations and supports to the JSD.

Ir LEUNG Kwok-tung, JP

Chairman of the HKIE Structural Division and Chairman of the JSD

Session 2016/2017

DISCIPLINE MATTERS

The HKIE Structural Examination

The HKIE Structural Examination consists of TWO parts: (a) written examination and (b) professional interview. Applicant passing both parts and meeting the experience requirements under the relevant routes to membership will be eligible to become Corporate Member of the HKIE in the Structural Discipline (subject to meeting other requirements in the HKIE Constitution). Passing the written examination is not a pre-requisite for taking the interview or vice versa.

The written examination of the HKIE Structural Examination (2016) was held on 2 December 2016 at the Kowloon Bay International Trade & Exhibition Centre. It consisted two sections in the form of multiple choice questions (one hour) and design questions (six hours). 433 candidates attended the written examination and 74 passed with a passing rate at 17%. Examination results were announced in April 2017 and the professional interview will be held in June/July 2017.

Chairman of Examination Board:

- Ir Prof Paul Pang Tat-choi

Chief Examiners of Design Questions:

- Ir Benny LAI Siu-Lun
- Ir Dr James LAU Chi-wang
- Ir Prof LAU Ching-kwong
- Ir Prof LAW Kwong-sang
- Ir Paul TSANG Sau-chung
- Ir WONG Chi-ming

Chief Examiners of M.C. Questions:

- Ir Prof CHAN Siu-lai
- Ir KWAN Kin-kei
- Ir Dr Eddie LAM Siu-shu
- Ir LAU Chi-kin
- Ir NG Kin-shing
- Ir Dr SU Kai-leung



Lastly, I would like to express my heartfelt thanks to the Examination Board Chairman, Chief Examiners, Examination Markers and Interviewers and, in particular, the JSD Committee, for the dedicated efforts throughout.

Ir Prof CHAN Siu-lai

Chairman of HKIE Structural Discipline

Dated 12 May 2017

DISCIPLINE MATTERS

EVENT HIGHLIGHTS

Examination Markers:

Ir Anthony AYIOMAMITIS	Ir Dr KOON Chi-ming	Ir Stephen LEUNG Kin-fung	Ir TAI Kwok-kuen
Ir CHAN Chi-kong	Ir KU Ka-cheong	Ir LEUNG Pak-wai	Ir TAM Hon-wing
Ir Prof Edmond CHAN Chu-fai	Ir KU Kwai-yau	Ir Lesly LEUNG Po-po	Ir TAM Kuen-wai
Ir CHAN Chung-ming	Ir Prof KUANG Jun-shang	Ir LEUNG Siu-ming	Ir Benson TAM Yun-lam
Ir Winifred CHAN Ho-wai	Ir KUO Tung-ming	Ir LEUNG Wai-bun	Ir Calvin TANG Chi-ho
Ir Eric CHAN Kar-lock	Ir Albert KWAN Chi-lap	Ir LEUNG Wan-cheong	Ir William TANG Chung-ming
Ir CHAN Ngai-tung	Ir KWAN Kai-sing	Ir LEUNG Yu-wah	Ir Kevin TANG
Ir CHAN Pak-wing	Ir KWAN Kin-kei	Ir LI Ting-fan	Ir TANG Lap-wing
Ir Edward CHAN Sai-cheong	Ir Helen KWAN Po-jen	Ir Dr LIU Chi-hong	Ir Alex TANG Quoc-Tri
Ir CHAN Siu-tack	Ir Philip KWOK Chi-tak	Ir Albert LIU Chi-rwun	Ir TANG Tsz-rit
Ir CHAN Wai-ching	Ir KWONG Po-lam	Ir Henry LIU Kwok-chuen	Ir Raymond TANG Wai-ming
Ir Dr CHENG Hon-tung	Ir Raymond KWONG Shiu-tee	Ir LIU Sik-wing	Ir TO Yui-kay
Ir CHENG Koon-yuk	Ir KWONG Wing-cheong	Ir LIU Tai-chuen	Ir TONG Fung-ming
Ir CHENG Pui-wan	Ir KWONG Wing-kie	Ir Dr LIU Yui-shing	Ir TSANG Chun-wing
Ir CHEUNG Ching-ting	Ir Otto LAI Hou-shun	Ir Stephen LO Gon-fai	Ir TSANG Kwok-leung
Ir CHEUNG Kwok-choi	Ir LAI Wai-wah	Ir Raymond LO Man-chiu	Ir Kelvin TSANG Ping-fai
Ir Wilson CHEUNG Yiu-sun	Ir Dr Willy LAI Yui-fai	Ir LO Ting-kwong	Ir TSE Kam-leung
Ir CHIK Lai-keung	Ir LAM Che-leung	Ir LOKE Hing-wa	Ir TSE Kin-shing
Ir CHIM Chin-yiu	Ir Kevin LAM Chun-yin	Ir LUI Kam-wah	Ir TSE Pak-kin
Ir Jacky CHIONG Kam-yueng	Ir LAM Lo-tung	Ir LUK Man-kit	Ir TSE Wai-keung
Ir CHIU Koon-man	Ir LAM Ming-fai	Ir MAK Kin-mau	Ir TSE Wing-chung
Ir Anthony CHIU Yan-mong	Ir Lysander LAM Ping-chuen	Ir MAK Kwok-shing	Ir WAI Sai-chong
Ir CHONG Hing-pong	Ir Dr Eddie LAM Siu-shu	Ir MAK Ming-fai	Ir WAN Yiu-lun
Ir CHOY Chun-chuen	Ir LAM Tat-shing	Ir MAK Tsz-yee	Ir WONG Bun
Ir Prof CHOY Kin-ruen	Ir LAM Tsz-fung	Ir Prof Neil Colin	Ir Patrick WONG Che-ming
Ir Prof Adam CHOY Siu-chung	Ir LAM Lam Yeuk-hon	MICKLEBOROUGH	Ir Louis WONG Chin-to
Ir Dr Paul CHU Chi-keung	Ir Dr LAU Chee-sing	Ir Kenneth MO Kon-fei	Ir WONG Him-sun
Ir Prof Reuben CHU Pui-kwan	Ir LAU Chi-keung	Ir Martin MOK Chi-wah	Ir WONG Hon-wah
Ir CHU Wui-cheung	Ir Dr LAU Chi-keung	Ir James MOK Hing-wah	Ir Wong Kai-fat
Ir Robinson CHUNG Kam-yin	Ir LAU Chi-kin	Ir Andrew MOK Hon-kit	Ir Thomas WONG Kam-chuen
Ir CHUNG Kwong-nung	Ir Albert LAU Chi-ming	Ir Daniel MOK Kin-yau	Ir WONG Kin-yan
Ir CHUNG Lung-to	Ir William LAU Chi-yau	Ir NG Hon-keung	Ir WONG Ko-yin
Ir FAN Siu-kay	Ir Henry LAU Kin-houng	Ir NG Kam-tong	Ir WONG Kong-loi
Ir FOK Chun-ming	Ir LAU Wai-ming	Ir NG Kin-shing	Ir Richard WONG Kwok-chuen
Ir FOK Wing-huen	Ir LAU Wing-yin	Ir NG Pak-cheong	Ir WONG Lai-kit
Ir FUNG Chi-keung	Ir LAW Yu-cheong	Ir NG Tim-yeung	Ir WONG Po-chi
Ir FUNG Ho-wing	Ir Alexis LEE Chi-chuen	Ir NGAI Wai-bun	Ir WONG Wai-hing
Ir FUNG Hoi-fai	Ir Peter LEE Kai-kwong	Ir Peter TO	Ir WONG Woon-ri
Ir FUNG King-cheong	Ir Walter LEE Kin-sun	Ir PO Lap-fun	Ir WONG Yat-cheong
Ir Joseph HO Chung-leung	Ir LEE Kwok-chung	Ir Anthony PUN Wing-chiu	Ir Andes WONG Yiu-wang
Ir Humphrey HO Hon-kit	Ir Lucas LEE Kwok-keung	Ir SETO Cheuk-ming	Ir WU Chung-kei
Ir Kenith HO Ka-kit	Ir Teresa LEE Mei-wai	Ir SHAM Sai-wah	Ir WU Kwok-wai
Ir HO Koon-ho	Ir LEE Ping-ruen	Ir Carmine SIU Koon-hoi	Ir Alex WU Po-tak
Ir Dr Goman HO Wai-ming	Ir LEE Shih-ming	Ir SO Chi-ho	Ir Hugh WU Sai-him
Ir Stephen HOU Ting-fun	Ir LEE Shiu-ming	Ir Claudius SO Kai-wing	Ir YAP Kin-yung
Ir David HOWE Wing-chi	Ir LEE Wing-hong	Ir SO Kit-keung	Ir Alan YAU Hoi-ngan
Ir Dr Lilian HUI Ming-fong	Ir Edwin LEE Yat-sing	Ir SO Kwok-leung	Ir YAU Yiu-fong
Ir David HUNG	Ir Dr Andy LEE Yui-nin	Ir SO Wah-wai	Ir YEUNG Chi-man
Ir IEONG Kwok-lun	Ir LEE Yun-choi	Ir SO Yan-wing	Ir Jenny YEUNG Fei
Ir IP Wai-leung	Ir Christopher LEE Yung-ling	Ir SONG Ngan	Ir YIM Chung-wah
Ir Eric KAN Shiu-kay	Ir LEI Veng-kei	Ir Dr SU Kai-leung	Ir YIP Wing-chung
Ir KANG Man	Ir Ben LEUNG Chi-hung	Ir SZE Wang-cho	Ir Gabriel YU Lin-keung
Ir KEUNG Wai-chung	Ir Francis LEUNG Chi-suen	Ir Helen SZETO Suet-man	Ir Ringo YU Shek-man
Ir Paul KONG Ming	Ir LEUNG Chi-wing	Ir TAI Chi-ho	Ir Maurice YUEN Chi-hung
Ir KONG Shui-sun	Ir Derrick LEUNG Hung-kwong	Ir TAI Chi-sing	

Technical Meetings & Visits 2016/2017

Date	Details
4 August 2016 (Thursday)	Technical meeting on "Structural Monitoring of Long Span Bridges" by Ir Prof YL XU of PolyU
25 August 2016 (Thursday)	Technical meeting on "Behaviour and Design of Prestressed Stayed Steel Columns" by Prof M Ahmer WADEE of Imperial College London Jointly organized with HKU
2 September 2016 (Friday)	Technical meeting on "Use of High Performance Steel Materials S690 in Building Structures" by Ir Prof KF CHUNG of PolyU Jointly organised with the Faculty of Construction and Environment of PolyU
26 September 2016 (Monday)	Young or Ready Series: "A Route to become a Professional Structural Engineer" by Ir Ken KS NG of the HKIE Structural Division Jointly organized with The HKIE Young Members Committee
29 September 2016 (Thursday)	Technical meeting on "Redevelopment Project at Lee Tung Street & McGregor Street" by Ir Ben CH LEUNG of C M Wong & Associates Limited
22 October 2016 (Saturday)	Preparatory Seminar for the HKIE Structural Examination (Written Examination) by Chief Examiners of the Written Examination



▲ Presented by Ir Prof YL XU of PolyU



▲ Presented by Prof M Ahmer WADEE of Imperial College London



▲ Presented by Prof KF CHUNG of PolyU



▲ Presented by Ir Ben CH LEUNG of C M Wong & Associates Limited

EVENT HIGHLIGHTS

Technical Meetings & Visits 2016/2017

Date	Details
25 October 2016 (Tuesday)	Technical meeting on "Sludge Treatment Facility at Tuen Mun (T-Park) Steel Frame Design" by Mr Simon PICKARD & Mr Chris TIDBALL of Arup
28 October 2016 (Friday)	Technical meeting on "Innovative Structural Design of Long Span Steel Footbridge for The Wings II" by Ir Teddy SIU of Sun Hung Kai Architects and Engineers Ltd. & Dr YP LIU of PolyU Jointly organized with The HKIE Young Members Committee
2 November 2016 (Wednesday)	Technical meeting on "Impact of the Latest Revision of Structures Design Manual for Highways and Railways on Bridge Design" by Ir Prof Francis TK AU of HKU
16 November 2016 (Wednesday)	IStructE Presidential Address on "Art of the Possible" by Mr Alan CROSSMAN of IStructE
29 November 2016 (Tuesday)	Technical meeting on "Modern Design of Steel Structures by Second-order Direct Analysis Method with Semi-rigid Joints - Research and Practice" by Ir Prof SL CHAN & Dr SW LIU of PolyU
3 December 2016 (Saturday)	Site visit to Xiqu Centre, West Kowloon Cultural District
8 - 10 December 2016 (Thursday - Saturday)	Technical Visit to Chengdu, China Jointly organized The HKIE Geotechnical Division



▲ Presented by Mr Simon PICKARD & Mr Chris TIDBALL of Arup



▲ Presented by Ir Teddy SIU of Sun Hung Kai Architects & Engineers Ltd. & Dr YP LIU of PolyU



▲ Presented by Ir Prof Francis TK AU of HKU



▲ Presented by Ir Prof SL CHAN & Dr SW LIU of PolyU



▲ Site visit to Xiqu Centre

EVENT HIGHLIGHTS

Technical Meetings & Visits 2016/2017

Date	Details
10 December 2016 (Saturday)	Site visit to Macau MGM Cotai Project
28 December 2016 (Wednesday)	Technical meeting on "Fillers' Application in Concrete" by Dr Johnny CM HO of University of Queensland, Australia
17 January 2017 (Tuesday)	Technical meeting on "Assessment, Monitoring and Mitigation of Construction-induced Vibrations" by Dr Songye ZHU of PolyU
17 February 2017 (Friday)	Technical meeting on "Design & Construction of the Guangzhou CTF Finance Centre" by Ir Anthony CHIU of Arup
23 February 2017 (Thursday)	Annual Seminar "Green Structure and Construction" by Various Speakers
1 March 2017 (Wednesday)	Technical meeting on "Design and Construction Challenges of Macau Eiffel Tower" by Ir Mike TAPLEY of Aurecon & Mr Martin DAVIES of Sands Casinos Ltd
2 - 6 March 2017 (Thursday - Monday)	Annual Visit - Singapore
13 March 2017 (Monday)	Technical meeting on "Debriefing of the Technical Visit to Chengdu, China" Jointly organized The HKIE Geotechnical Division



▲ Site Visit to Macau MGM Cotai Project



▲ Presented by Dr Johnny CM HO of University of Queensland, Australia



▲ Presented by Ir Anthony CHIU of Arup



▲ Presented by Ir Mike TAPLEY of Aurecon & Mr Martin DAVIES of Sands Casinos Ltd

EVENT HIGHLIGHTS

Technical Meetings & Visits 2016/2017

Date	Details
21 March 2017 (Tuesday)	Technical meeting on "Structural Health Monitoring of Supertall Buildings" by Dr Yong XIA of PolyU
31 March 2017 (Friday)	Technical meeting on "Development Versus Heritage Conservation: Transformation of Former Hollywood Road Police Married Quarters into PMQ (元創方)" by Ir KT LEUNG, JP, Ir Dr MK WONG & Ir MK LEUNG of ArchSD Jointly organized with Department of Civil and Environmental Engineering, PolyU
12 April 2017 (Wednesday)	Technical meeting on "Studio City Macau" by Ir Sammy NT YEUNG of AECOM
24 April 2017 (Monday)	Technical meeting on "Ship Impact Protection of Marine Crossing" by Dr Barry KW LEE of AECOM
11 May 2017 (Thursday)	Technical meeting on "Steel building design to EC3 – Opportunities, Challenges and Changes" by Mr David BROWN of Steel Construction Institute, UK



▲ Presented by Dr Yong XIA of PolyU

EVENT HIGHLIGHTS

"Structural Engineering Competition for Youth - Paper Frame Structure Challenge"

On 16 July 2016, "Structural Engineering Competition for Youth – Paper Frame Structure Challenge" co-organized by the Joint Structural Division (JSD) and Education Bureau was held in The Hong Kong Polytechnic University. This is the second competition preceded by the Paper Tower Challenge last year to inspire the youth to become elite engineers in the future by developing their analytical and communication skills and acquiring engineering knowledge through building and testing a paper frame structure. Sponsored by Yau Lee Construction Company Limited and supported by the local universities, the competition was a great success with 22 teams from 15 secondary schools. Each team was then given 2.5 hours to build a frame structure of height 1.3 m using tapes and recycled papers. Each frame structure was subjected to an increasing horizontal force until collapse. Judging criteria included strength, lightness, aesthetic and innovation.

Overall Prizes	Awardees	Name of team
Champion	Mu Kuang English School	Mu Kuang – Team A
First runner-up	HKFYG Lee Shau Kee College	HLC – Team 2
Second runner-up	Po Leung Kuk Ma Kam Ming College	D Sky
Other commendations	Awardees	Name of team
Strongest frame	HKFYG Lee Shau Kee College	HLC – Team 2
Lightest frame	Tung Wah Group of Hospitals Chen Zao Men College	Araldite
Most aesthetic and innovative frame	Tak Oi Secondary School	TOSS – Team B



EVENT HIGHLIGHTS

Annual Seminar 2017 on "Green Structures and Construction"

The Annual seminar 2017 was successfully held on 23 February 2017 at the Jockey Club Auditorium of the Hong Kong Polytechnic University. The seminar with the theme "Green Structures and Construction", was overwhelmingly received with over 300 participants.

Ir LEUNG Kwok-tung, JP, Chairman of the Joint Structural Division (2016-2017), started the Annual Seminar with the Welcome Speech. Opening Address was delivered by Guest of Honour Mr Wong Kam-sing, GBS, JP, Secretary for the Environment of the HKSAR Government. Prominent local and overseas speakers shared their experiences, insights and innovative ideas in both research and application of structural engineering which would inspire the construction industry at large towards green structure and construction.

Distinguished speakers included (in order of presentation): Er. CHEW Keat-chuan, Ir Prof Paul PANG Tat-choi & Prof Ben CHAN Yui-ban, Ir Prof Daniel LO Sai-huen, Ir Prof POON Chi-sun, Ir CHIN Sai-ping, Ir Rayson WONG Wai-hung, Ir KAN Chun-yuk & Ir Prof CHAN Siu-lai.

Q&A sessions open to the floor were hosted by Ir Edward CHAN Sai-cheong and Ir Benny LAI Siu-lun. The event was successful concluded following the closing remarks by Ir Ken NG Kin-shing, the Immediate Past Chairman of JSD (2016/2017).

Organizing committee of Annual Seminar 2017

Chairman

Ir Edward CHAN Sai-cheong

Member

Ir CHAN Chi-kong

Ir Prof CHAN Siu-lai

Ir Prof LO Sai-huen

Ir Ken Ng Kin-shing

Ir TSE Kam-leung

Ir Ben TSE Wai-keung

Ir Thomas WONG Kam-chuen



EVENT HIGHLIGHTS

Annual Dinner 2016

The Annual Dinner 2016 was successfully held on 6 October 2016 at the Holiday Inn Golden Mile Hong Kong drawing attendance of over 450 members and guests. JSD is privileged to have Mr Paul CHAN Mo-po, GBS, MH, JP, Secretary for Development of the HKSAR Government as the Guest of Honour.

Other distinguished guests included Mr LEUNG Koon-kee, JP, Director of Architectural Services of Architectural Services Department, Mr HUI Siu-wai, JP, Director of Buildings of Buildings Department, Mr AU-YEUNG Yan-sang, JP, Deputy Head of the Geotechnical Engineering Office (Island) of Civil Engineering and Development Department and Ir Joseph CHOI Kin-hung, President of HKIE.

Annual Dinner Organizing Committee 2016

Chairman

Ir Benny LAI Siu-lun

Member

Ir LAM King-kong

Ir LUI Yuen-tat

Ir Jacky CHIONG Kam-yueng

Ir CHAN Chi-kong

Ir TSE Kam-leung

Ir Prof CHAN Siu-lai

Ir LAU Chi-rin

Ir Ben TSE Wai-keung



STRUCTURAL EXCELLENCE AWARD 2017

The Structural Excellence Award (formerly Structural Awards) aims to promote excellence in structural engineering demonstrated through the design and construction of buildings and structures completed in the last two years. The first award was held in 1998 / 1999 and this year is the 19th event.

There are three categories of entries, namely Hong Kong Projects, Mainland (including Macau & Taiwan) / Overseas Projects & Research and Development (R&D) which was introduced last year aiming to promote excellence in structural engineering through research and application.

On 10 March 2017, the Judging Panel short-listed 23 finalists of Project Awards and R&D Award. Following finalist presentations on 25 March 2017. Project Awards were decided with emphasis on Engineering Approach, Integration, Innovation / Unusual Features, Buildability, Energy Efficiency / Environmental Consideration / Sustainability and Aesthetics. R&D Awards were selected on the importance to Engineering Application, Theoretical Background, Innovation / Originality and Sustainability.

1 local project and 1 overseas project were awarded as Grand Awards and 1 research paper won the Grand Award. Below is the winner list.

GRAND AWARD



Hong Kong Project

Revitalization of Grade II Historic Chai Wan Factory Estate to Public Rental Building (Category: Heritage)

Mainland / Overseas Project

Raffles City Hangzhou, China (Category: Mainland / Overseas Project)

R&D Award

Assessing the effect of bi-directional loading on nonlinear static and dynamic behaviour of masonry-infilled frames with openings

Members of the Judging Panel

Chairman

Ir LEUNG Kwok-tung, JP

Member

Ir Stephen LEE Yun-choi
Ir Prof LO Sai-huen
Prof David NETHERCOT
Ir Prof Paul PANG Tat-choi
Ir Martin TSOI Wai-tong
Ir Dr Greg WONG Chak-yan, JP, BBS

Organizing Committee

Chairman

Ir Edward CHAN Sai-cheong

Member

Ir CHAN Chi-kong
Ir Prof CHAN Siu-lai
Ir LAU Chi-kin
Ir Ken NG Kin-shing
Ir TSE Kam-leung
Ir Ben TSE Wai-keung
Ir Thomas WONG Kam-chuen

GRAND AWARD

Revitalization of Grade II Historic Chai Wan Factory Estate to Public Rental Building

Winner: Hong Kong Housing Authority
Hong Kong Project - Heritage



Client:	Hong Kong Housing Authority - Project Sub-division 2
Structural Engineer:	Hong Kong Housing Authority Structural Engineering Section 3
Architect:	Hong Kong Housing Authority Architectural Section 4
Main Contractor:	Yau Lee Construction Company Limited

Project Description

- The 58-year old Grade II historic Chai Wan Factory Building was revitalized into Public Rental Housing.
- Increase short-term supply of Public Rental Housing units and address community's strong aspiration to preserve the last H-shape factory building.
- Create an urban oasis in industrial setting with high proportion of greenery.
- Comply not only with the current statutory regulations but also enhance the structural durability to extend residual service life of the building.
- Demonstrate innovative structural upholding method for aged buildings.
- Use low vibration concrete removal method.

Project Features

- The building's character-defining elements with historical value, identified by Antiquities and Monuments Office, are preserved:-
 - H-shape configuration
 - Strong horizontality of building outline
 - Slab-beam-column arrangement
- Use investigation findings to formulate rehabilitation approach:-
 - Reconstruct the seriously deteriorated Central Toilet Block
 - Recast the deteriorated corridor slabs and parapet at Wing Blocks
 - Uphold other elements with local repair and durability enhancement
 - Reuse pile foundation
- Use saw-cutting and remote control robot for concrete removal to minimize vibration and nuisance.

STRUCTURAL EXCELLENCE AWARD 2017

GRAND AWARD

Raffles City Hangzhou, China

Winner: Arup

Mainland / Overseas Project



Client: CapitalLand China
Structural Engineer: Arup
Architect: UNStudio / China United Engineering Corporation
Main Contractor: Shanghai Construction No. 4 (Group) Co., Ltd.
MEP Engineer: Arup

Project Description

- Raffles City Hangzhou (RCH) features two 250m tall twisting towers, a 10-storey shopping podium with four long-span linking bridges.
- The tower building envelope was formed through the outer moment frame of the structure, and each segment of the column is inclined at a different angle and with a different orientation.
- The podium structure has a very dynamic internal spaces. Long span corridor links a varying funnel-shaped atria supported by four pairs of 600mm diameter columns with up to 23m long span beam.
- With a total GFA of 393,000m², the project incorporates retail, offices, housing and hotel facilities.

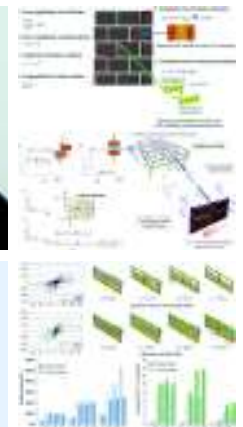
Project Features

- The tower structural system is a mainly RC structure with RC core, RC floors, concrete filled steel tubular (CFT) perimeter columns and steel reinforced concrete (SRC) perimeter frame beams.
- Innovative refinement in the perimeter CFT column and SRC beam connection: enlarged steel sections were used in SRC and RC beams at the beam ends to connect the beams to CFT columns and received all re-bars in the beams. Inner stiffening plates were used in the columns.
- Various structural systems to realise the double-curved podium envelop, including inclined wind posts with in-situ concrete panels and steel backing frames with shotcrete panels to form the double-curved façade backing surface. This was assisted through creative use of parametrically-driven 3D geometric software and tools.

GRAND AWARD

Assessing the effect of bi-directional loading on nonlinear static and dynamic behaviour of masonry-infilled frames with openings

R&D Award



Author(s): Terry Y. P. Yuen, J. S. Kuang, B. S. M. Ali
Publication Date of Paper: 08 March 2016
Published Journal(s): Bulletin of Earthquake Engineering – Official Publication of the European Association for Earthquake Engineering (EAE)

Aims of the research / Paper abstract

In assessing the structural performance of infilled frames, in particular, those with irregular and discontinuous infill panels, under bi-directional seismic excitation, the interaction effect of in-plane and out-of-plane lateral loads should be properly considered. This paper presents an investigation into the effect of bi-directional horizontal loading on the nonlinear static and dynamic behaviour of masonry-infilled reinforced concrete frames with openings in association with discrete-finite element modelling techniques. Out-of-plane loading and openings can significantly soften the bracing action provided by infill walls to the bounding frame. Under static load, the lateral strength of the infilled frames can reduce by 20–50 % when the applied out-of-plane load increase from 0.5 times to 2.0 times the unit weight of infills. The out-of-plane effects are intensified in dynamic loading cases. It is found that the peak base shears of the fully infilled frame under the bidirectional excitations can be lower by 25 % and 55 % as compared with the uni-directional load cases. The displacement demands are also greater under bidirectional dynamic loading. For 2/3 height infilled frame, the displacement demands are significantly increased by as much as 111.0 %. For the fully infilled frame, the displacement demands can be 84 % higher. Due to the incapability of developing continuous arching action, the infill panels with openings are particularly vulnerable to out-of-plane action and that often leads to the progressive collapse of infill components. The worst scenario is that total collapse of infill panels takes place at the first storey, creating a soft-storey that jeopardise the overall structural stability.

A brief on unusual features

- This paper addresses an important and challenging topic in earthquake engineering of building structures: how masonry infills would interact with the reinforced concrete frames and shift the expected as-designed good structural performance into potentially disastrous behaviour.
- A novel and verified numerical modelling technique, which combines finite element method and discrete element method with damage-based cohesive cracking behaviour, was developed to simulate the complicated nonlinear dynamic responses of RC frames with masonry infills under bidirectional seismic actions.
- Various vulnerabilities of infilled RC frame structures of different configurations are successfully identified and quantified and those quantified results can be used to assess the seismic risk of existing infilled frame structures and to aid structural engineers to evaluate the realistic seismic performance of their designed structures if the effects of infills cannot be isolated.

STRUCTURAL EXCELLENCE AWARD 2017

COMMENDATION MERIT

ALASSIO

Winner: C M Wong & Associates Ltd.

Hong Kong Project - Residential
(Construction cost more than HK\$500 million)



Client:	Wonder Cruise Group Limited (Swire Properties Limited)
Structural Engineer:	C M Wong & Associates Ltd.
Architect:	Dennis Lau & Ng Chun Man Architects & Engineers (HK) Limited
Main Contractor:	Hip Hing Construction Co. Limited
Building Services Engineer:	Parsons Brinckerhoff (Asia) Limited
Landscape Architect:	Adrian L. Norman Limited
Quantity Surveyor:	Langdon & Seah Hong Kong Limited
BEAM Consultant:	Hyder Consulting Limited
Contractor (Foundation):	Gammon Construction Ltd.
Contractor (Demolition Works):	YSK2 Engineering Co. Limited

Project Description

- A 50-storey high-rise residential development in mid-levels Hong Kong (scheduled area no. 1)
- The project site is in close proximity of a declared monument, Kam Tong Hall which is very sensitive to vibration.
- The competent rockhead across the site is over 100m below existing ground level.
- The building is tall and slender.

Project Features

- Use of shaft grouted large diameter bored piles founded on Saprolite. This is a fiction pile with low construction vibration that limited the disturbance to surrounding residents and structures. Adoption of shaft-grouting to enhance the load carrying capacity of bored piles.
- Use of wind tunnel to rationalize the wind effects to the tall and slender building. The size of the structural elements are optimized, subsequently maximizing the useable floor area.
- Post-tensioning Prestressing Transfer (PT) Plates to overcome the layout differences between the typical floors and the podium. The use of PT transfer plate reduce the thickness of transfer plate, reduce the content of concrete and reinforcement and improve the headroom at the upper unit.

COMMENDATION MERIT

Trade and Industry Tower, Kai Tak

Winner: Architectural Services Department and Arup

Hong Kong Project - Non-Residential
(Construction cost more than HK\$500 million)



Client:	Government Property Agency, The Government of the HKSAR
Project Manager:	Architectural Services Department, The Government of the HKSAR
Structural Engineer:	Arup
Architect:	Wong Tung & Partners Ltd
Main Contractor:	Dragages Hong Kong Ltd

Project Description

- With a GFA of 54,000m², the Trade and Industry Tower at Kai Tak (TITKT) provides office space for various government departments and a community hall for public leisure.
- The 20-storey tower features a double-height entrance lobby and a post office on the ground floor. It is connected to the adjacent community hall via a single-level basement carpark.
- A design-and-build contract that enabled the project team to look holistically at the entire design.
- Structural schemes were selected that favours the construction of the structural works while facilitating a smooth coordination with the design and an efficient installation of other trades like building services, façade and interior fitting-outs.

Project Features

- The tower features a distinctive "green ribbon" – landscaped bands of horizontal and vertical planting, topped off with a natural green roof. The achieved Green Ratio is 42%.
- To promote buildability and easy maintenance, a high degree of standardised and modular construction was applied in the project, such as in curtain wall, raised floor and ceiling, cross-strutting in the ELS works, and the system formwork for the floor slab which can be re-used up to 20 times.
- The first government project to achieved LEED® Platinum rating.
- Achieved BEAM Plus Provisional Platinum rating.
- Green Building Awards 2014 – Grand Award in New Building Category (Buildings under Construction).

STRUCTURAL EXCELLENCE AWARD 2017

COMMENDATION MERIT

Revitalization Project at No 9-12 Yu Lok Lane, Sai Ying Pun

Winner: C M Wong & Associates Ltd.

Hong Kong Project - Heritage



Client: Maxjet Co. Ltd (URA/China Overseas Property Ltd)
Structural Engineer: C M Wong & Associates Ltd.
Architect: AEDAS Ltd.
Main Contractor: Hsin Chong Construction (Asia) Ltd
Building Services Engineer: WSP H.K. Ltd
Landscape Architect: Urbis Ltd.
Conservation Consultant: Centre for Architectural Heritage Research, CUHK
Quantity Surveyor: Sweet (China) Ltd.
Contractor (Foundation): China State Foundation Eng. Ltd
Contractor (Conservation): Ding Hsung Construction Company

Project Description

- 9-12 Yu Lok Lane is a Grade 3 Historical Building built in 1918. Efforts were made to preserve as many character defining elements of the original buildings as possible. Numerous complex structural design calculations were carried out to find the optimum and often innovative structural solution, which results in a buildable outcome.
- This heritage building provides an iconic element to the redevelopment project "The Nova (星鑽)" through preservation and revitalization, by extending the structural life of the heritage building. Additional elements were added to adapt to the change in use and meet current regulations.

Project Features

The Revitalization works include the followings:

- Remove and re-install the timber roof which would be strengthen by structural steel;
- Addition of brick wall opening with strengthening work for better circulation. The size and location of the opening was dictated by the strength of the existing brick wall;
- Recast the concrete feature balcony;
- Removal of UBW, and
- Addition of New Disable toilet and M&E facilities.

COMMENDATION MERIT

Contract No. DC/2007/23 Harbour Area
Treatment Scheme Stage 2A Construction of
Sewage Conveyance System from North Point to
Stonecutters Island

Winner: Gammon Construction Limited

Hong Kong Project - Infrastructures & Footbridges



Client: Drainage Services Department
Main Contractor: Gammon Construction Limited

Project Description

- HATS is an overall sewage collection and treatment scheme for areas on both sides of Victoria Harbour to improve its water quality.
- The project of HATS Stage 2A, responsible by Gammon, comprises the construction of three deep tunnels to collect and convey the preliminarily treated sewage along the north of Hong Kong Island and under the Victoria Harbour to Stonecutters Island for chemical treatment.
- The three tunnels are totalling 12 kilometres in length and up to 165 metres in depth, the deepest in Hong Kong.
- The project also involves the construction of eight shafts.

Project Features

- The scum removal chamber (SRC) was relocated as an innovative move to minimise confined and congested underground construction works.
- Benefits of relocation of SRC
 - saved construction time
 - mitigated risks of affecting structural integrity of adjacent structures, &
 - reduced amount of construction spoils and carbon footprint.
- Effective application of large diameter bored pile technique for shaft construction had created tangible values, in terms of buildability, safety, programme and environment protection.
- Gammon's concrete technology has also contributed to effectively lining the HATS sewage tunnel with high performance concretes and long-distance pumping.
- Leverage technologies of BIM & 3D Scanning

STRUCTURAL EXCELLENCE AWARD 2017

COMMENDATION MERIT

Hong Kong International Airport Midfield Concourse

Winner: Mott MacDonald Arup JV

Hong Kong Project - Infrastructures & Footbridges



Client: Airport Authority Hong Kong
Structural Engineer: Mott MacDonald Arup JV
Architect: Aedas
Main Contractor: Gammon Construction Limited

Project Description

- Located to the west of Terminal 1 and between the two existing runways at the Hong Kong International Airport, the five-level concourse has a total floor area of 105,000m².
- The Concourse has an overall length of over 700m and consists of a 3-storey concrete framed structure (apron, arrival and departure levels) covered with a featured long span steel roof with unique skylights.
- There are 20 aircraft parking stands, 19 of which are bridge-served, including two Code F (A380) stands. Passengers will also be connected to Terminal 1 via an extended automated people mover (APM).
- Building up to full operations with 230 flights per day, the Concourse can handle in excess of 10m additional passengers per year.

Project Features

- The main roof of the Concourse features a unique curved form with a skewed orientation of the main trusses, fully aligned and integrated with the skylights as well as the curvilinear architectural ceiling profile.
- The roof spans approximately 42m across the width of the Concourse to provide a column-free interior. Both sides of the building are fully glazed, with roof skylights angled towards the north, tracing the north light – a key architectural design consideration.
- To cope with the geometry of the roof profile and to facilitate a rapid creation and subsequent update of the structural model, an advance parametric modelling approach was adopted to facilitate the coordination with architect and the design team as well as to optimise the design of the roof steel structure.
- A systematic method of mechanised construction with no timber falsework required was adopted to ensure consistent speed, quality, safety and improve cost control – all beneficial for the programme surety and the environment.

COMMENDATION MERIT

Shenyang New World Centre – Shenyang New World Expo

Winner: AECOM Asia Company Limited

Mainland / Overseas Project



Client: New World China Land Ltd
Structural Engineer: AECOM Asia Company Limited
Architect: Dennis Lau & Ng Chun Man Architects & Engineers (HK) Limited
Main Contractor: China Construction Third Engineering Bureau Co. Limited



Project Description

- Shenyang New World Centre is a major comprehensive development at the heart of Heping District, Shenyang.
- The GFA of the entire development is over 1.2 million m².
- This development consists of a 6-floors Expo Podium with 2-floors basement functioning as a multi-use K11 art mall and a large convention centre, and also seven hotel / service apartments / office towers between 113 to 250m tall.
- The podium is connected to Metro in the basement.
- Various structural and foundation systems are adopted such as flat slab, waffle slab, beam-column frame, shear-wall frame, core-frame, steel truss, mega space frame, RC steel composite elements and post-tensioning beams.

Project Features

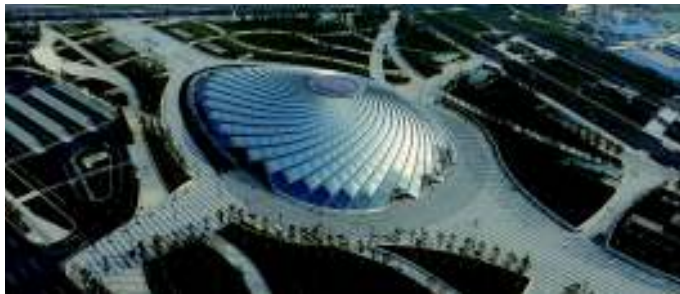
- The expo design combines innovation, functionality, sustainability, economy and aesthetics. Features include:
- Large varieties of foundation and structural systems to satisfy functional / architectural requirement and maximize cost effectiveness.
 - High-rise 110m 24-storey hotel on raft-footing foundation.
 - Large convention centre with column-grid of 36mx36m and two-way post-tensioning continuous beams that support a heavy roof garden. The PT beam system constitutes one of the longest spans and largest areas for buildings in China. The 70,000m² large roof garden is also a distinctive feature.
 - Aesthetic space frame roof of 250m x 80m resembling a giant bird.
 - Large-scale glass boxes that utilize natural daylight and improve energy efficiency.

STRUCTURAL EXCELLENCE AWARD 2017

COMMENDATION MERIT

YuJiaPu Railway Station Roof Winner: Arup

Mainland / Overseas Project



Client: Tianjin Third Railway Survey and Design Institute Group Corporation (TSDI)
Structural Engineer: Arup
Architect: Arup
Main Contractor: China Railway Engineering Corporation
Concept Architect: SOM

Project Description

YuJiaPu Railway Station is the Terminus for Beijing - Tianjin high speed Rail. With this new terminus, the direct train from Beijing to Binhai new development will now be just within 60 minutes. The station is also serve as a traffic hub with GFA 86,200m². It consists of five levels of basement where B1 is concourse and B2 is the platform level which have a total of 6 platforms. From B3 to B5 are three different underground lines. TSDI is the lead consultant of the project while Arup provides total solutions engineering services on the roof.

Project Features

The iconic "Shell" feature of the roof is now become the symbol of Tianjin New Binhai Financial Area. The roof is 140m long, 80m wide and 24m tall. It is a single layer diagrid shell roof from a concept of natural sea shell. Form finding technique was used to identify the best roof geometry instead of dimension set-up by architect. The roof was designed for wind, seismic snow load (with consideration of snow drift) and also checked for progressive collapse. Direct analysis technique is also used to check the global stability of the roof.

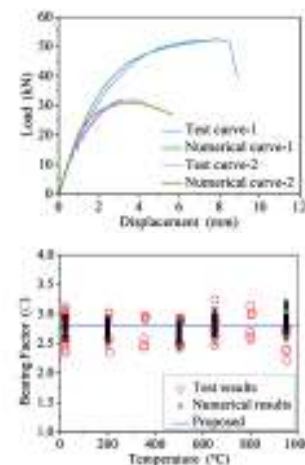
COMMENDATION MERIT

Bearing factors of cold-formed stainless steel double shear bolted connections at elevated temperatures

R&D Award



Author(s): Yancheng CAI, Ben YOUNG
Publication Date of Paper: 18-May-2015
Published Journal(s): Thin-Walled Structures



Aims of the research / Paper abstract

This paper presents an investigation on the structural behaviour of cold-formed stainless steel (CFSS) double shear bolted connections at elevated temperatures. The bolted connections were assembled by three different types of stainless steel materials, namely the austenitic stainless steel EN 1.4301, austenitic stainless steel with titanium EN 1.4571 and lean duplex stainless steel EN 1.4162. In this paper, an accurate finite element model was developed by verifying against 106 CFSS double shear bolted connection tests at elevated temperatures from 22 to 950 °C. The validated model was further used to generate 225 numerical results of CFSS bolted connections at elevated temperatures. The test and numerical results were compared against the current design values calculated from the Australian, European, and American standards. Two new bearing factors, by considering the ultimate strength criteria and bolt hole deformation criteria, are proposed. The reliability of the proposed design equations was evaluated by reliability analysis.

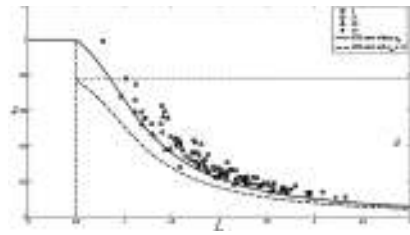
A brief on unusual features

- The newly developed CFSS lean duplex (EN 1.4162) has a higher strength and lower cost than the normal duplex stainless steel, but currently not covered in any design codes.
- The current design rules for CFSS bolted connections are mainly based on those of carbon steel at ambient temperature due to limited investigation.
- The differences between CFSS and carbon steel materials could be identified from their stress-strain curves and the fire resistance response.
- Up to date, there is no design rule for CFSS bolted connections at elevated temperatures.
- A comprehensive test program and numerical analysis on CFSS bolted connections at elevated temperatures was initiated.
- New bearing factors are proposed and recommended to engineers and code writers for design of CFSS double shear bolted connections for temperatures ranged from 22 to 950 °C.

COMMENDATION MERIT

Lateral-Torsional Buckling Design for Pultruded FRP Beams

R&D Award



Author(s): Tien-Thuy NGUYEN, Tak-Ming CHAN, James Toby MOTTRAM
Publication Date of Paper: 1st December 2015
Published Journal(s): Composite Structures



Aims of the research / Paper abstract

Pultruded Fibre-reinforced Polymers (PFRP) shape and systems are for building and bridge structures owing to their distinct advantages of lightweight, high strength and corrosion resistant. Inhibiting their wider exploitation is the lack of recognized design guidance. To provide practitioners with confidence to exploit this newer structural engineering material we can use robust research to prepare sound guidance. This paper is for the calibration of a design procedure for the elastic buckling failure of Lateral-Torsional Buckling (LTB), which is an ultimate mode for flexure actions about major-axis of open sections. We develop the procedure for members in bending based on methodologies from Eurocodes 0 and 3.

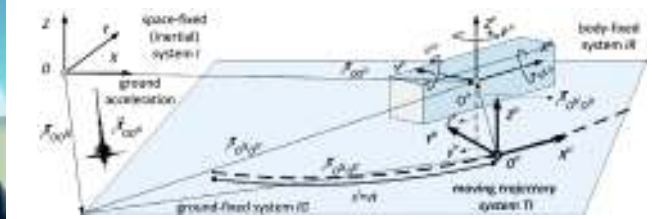
A brief on unusual features

- 100 previous tests had failed to satisfy the loading conditions for LTB resistances to be reliable; our testing overcame this weakness and gave 114 results for four PFRP sections at four or five span lengths and three vertical load positions.
- To calculate resistance based on the Eurocode 3 procedure the authors recommend a plateau length λ_{bar} of 0.5 and an imperfection factor α of 0.34. The partial factor γ_M is calibrated to be 1.14-1.19 for an I-section and 1.16 to 1.18 for three C-sections. To take account of the level of uncertainty in the geometries and failure loads γ_M is 1.3.
- ASCE pre-standard adopts a resistance factor of 0.7, which is equivalent to an γ_M of 1.4, 0.1 higher than we propose. This finding shows that our LTB tests and calibration process are more reliable than those available in 2010 when the pre-standard reliability calibration for phi was determined.

COMMENDATION MERIT

Seismic response analysis of an interacting curved bridge–train system under frequent earthquakes

R&D Award



Author(s): Qing ZENG and Elias G. DIMITRAKOPOULOS
Publication Date of Paper: 13 January 2016
Published Journal(s): Earthquake Engineering & Structural Dynamics

Aims of the research / Paper abstract

This paper establishes a scheme for the seismic analysis of interacting vehicle–bridge systems. The focus is on (horizontally) curved continuous railway bridges and frequent earthquakes. Main features of the proposed scheme are (i) the treatment of the dynamics in all three dimensions (3D), employing an additional rotating system of reference to describe the dynamics of the vehicles and a realistic 3D bridge model; (ii) the simulation of the creep interaction forces generated by the rolling contact between the wheel and the rail; and (iii) the integration of the proposed scheme with powerful commercial finite element software, during the pre-processing and post-processing phases of the analysis. The study brings forward the dynamics of a realistic vehicle–bridge (interacting) system during seismic shaking. For the (vehicle–bridge) case examined, the results verify the favorable damping effect the running vehicles have on the vibration of the deck. By contrast, the study stresses the adverse influence of the earthquake-induced bridge vibration on the riding comfort but, more importantly, on the safety of the running vehicles. In this context, the paper unveils also a vehicle–bridge–earthquake timing problem, behind the most critical vehicle response, and underlines the need for a probabilistic treatment. Among the 20 sets of historic records examined, the most crucial for the safety of the vehicles are near-fault ground motions. Finally, the study shows that even frequent earthquakes, of moderate intensity, can threaten the safety of vehicles running on bridges during the ground motion excitation, in accordance with recorded accidents.

A brief on unusual features

- In view of the recent developments in railway transportation, and the pertinent accidents reported already, this is a problem of increasing importance.
- This paper establishes a scheme for the seismic response analysis of an interacting vehicle–bridge system, focusing on (horizontally) curved railway bridges and frequent earthquakes for the first time.
- The study verifies the favorable damping effect the running vehicles have on the vibration of the deck. While traditional earthquake engineering focuses on the integrity of bridges under strong earthquakes, without considering the coupled effect of vehicle–bridge–interaction systems.
- The present study offers a glimpse into the salient features of the vehicle–bridge–earthquake coupling, this is an important but complicated problem which deserves further research.
- The paper also pinpoints directions for further research related to the influence of the particular kinematic characteristics of the seismic ground motion on the response of vehicle–bridge system, as well as, to a probabilistic treatment of the vehicle–bridge–earthquake timing problem.

STRUCTURAL EXCELLENCE AWARD 2017

FINALIST

HSMC Jockey Club Residential Colleges

Winner: AECOM Consulting Services Limited

Hong Kong Project - Residential
(Construction cost on or less than HK\$500 million)



Client: Hang Seng Management College
Structural Engineer: AECOM Consulting Services Limited
Architect: Wong & Ouyang (HK) Limited
Main Contractor: Build King Construction Limited



Project Description

Hang Seng School of Commerce was first established in 1980. The pioneering post-secondary school was re-structured to Hang Seng Management College in 2010.

The new student hostel site is located on a scenic hillside in Siu Lik Yuen, overlooking Tate's Cairn Tunnel. There are three 8 to 11 storeys high residential blocks with one landscaped podium and basement carpark. The Site area is around 7,721m² with total CFA of over 19,000m².

Construction commenced in January 2014 and completed with Occupation Permit obtained in September 2015. The development has received BEAM-Plus Platinum rating and was a Finalist in the Green Building Award 2016.

Project Features

- Adopted footings and socketed H-piles mixed foundation system to save cost and time;
- Adopted simple column-beam frame system instead of shear walls between flat units to maximize future flexibility.
- Adopted flat slab system at Ground Floor area with congested building services installation to minimize the structural depth and hence minimized basement rock excavation.
- Adopted integrated design approach with the extensive application of BIM technology including Civil BIM in the design coordination amongst the design consultants from feasibility study to construction stages.
- Extensive planting of bamboo around the buildings and use of rapidly renewable bamboo products for furniture, acoustic walls and flooring.

FINALIST

Century Link

Winner: Arup

Hong Kong Project - Residential
(Construction cost more than HK\$500 million)



Client: Sun Hung Kai Real Estate Agency Limited
Structural Engineer: Ove Arup & Partners Hong Kong Limited
Sun Hung Kai Architects and Engineers Limited
Architect: Wong Tung & Partners Limited
Main Contractor: Sanfield Engineering Construction Limited
Geotechnical Engineer: Ove Arup & Partners Hong Kong Limited

Project Description

- Century Link is a large-scale residential development in Tung Chung
- The GFA of the entire development is 136,700m².
- This development consists of a five residential towers each with 28 to 29 storeys, six low-rise units, a two-storey podium of clubhouse and retail facilities, and a single storey basement.

Project Features

- An innovative large displacement piling solution for foundation on complex adverse geology.
- A semi-top down approach for the extensive basement excavation which drastically accelerated the overall construction programme.
- A cost-effective and structurally efficient design in multiple aspects that optimised the functional needs for flexibility of the development and ease of construction.

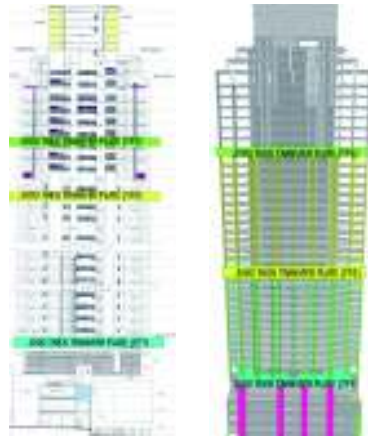
STRUCTURAL EXCELLENCE AWARD 2017

FINALIST

Imperial Kennedy

Winner: C M Wong & Associates Ltd.

Hong Kong Project - Residential
(Construction cost more than HK\$500 million)



Client: On Best Capital Investment Limited (Sun Hung Kai Group)
Structural Engineer: C M Wong & Associates Ltd.
Architect: MLA Architects (HK) Ltd
Main Contractor: Sanfield Engineering Construction Ltd.
Building Services Engineer: Consolidated Consulting Engineers Ltd.
Landscape Architect: Aurecon
Quantity Surveyor: Sun Hung Kei Architects & Engineers Ltd.
Contractor (Foundation): Kin Wing Engineering Co., Ltd
Contractor (Demolition Works): Ray On Construction Co., Ltd

Project Description

The development includes one 42-storey residential tower with 5-storey podium supported on the bored pile foundation. The building height of the tower block is 165.65m with main roof of last residential floor at 154.35 mPD. The major constraints include:

1. Different flat mix in 3 zones implied 3 different structural layout
2. High slenderness ratio

Project Features

- 3 Transfer plate at level at +30mPD, +72mPD & +114mPD are proposed to cater for different column & wall layout in 3 zones.
- The building is tall and slender Therefore, the wind load is critical. Adopting wind tunnel could provide a more comprehensive and rational way for analysis. To consider the human comfort, instead of controlling the deflection, acceleration is evaluated to be 0.145m/s^2 , which is within the 0.15m/s^2 limit set out in the Code of Practice of Structural Use of Concrete, 2004.
- C80 concrete are adopted for podium columns to maximize the useable floor area at podium.

FINALIST

Eastern Community Green Station

Winner: Architectural Services Department

Hong Kong Project - Non-Residential
(Construction cost on or less than HK\$500 million)



Client: Environment Protection Department
Project Manager: Architectural Services Department
Structural Engineer: Wong & Cheng Consulting Engineers Limited
Architect: LWK & Partners (HK) Ltd.
Main Contractor: Shui On Building Contractors Limited



Project Description

Eastern Community Green Station (CGS), located in Hong Kong East, is one of the pilot projects with an aim of strengthening environmental education and promoting waste reduction and recycling at the community level. The project comprises construction of office, education centre, storage area for recyclables as well as loading and unloading area for collection fleet. With the CGS's innovative and greening design, the site, which is underneath a flyover and used to be a temporary parking space, has been transformed into a public gathering place to bridge the old and new neighborhood within an existing dense residential area.

Project Features

- Innovative and sustainable design approach of reusing freight containers in standard size of 20- and 40-foot in full extent as the bases of building blocks as far as practicable yet modified to suit the need of different functions to cohere the project theme.
- Wide adoption of modular design with regular grid dimensions and lightweight steelwork to enhance buildability and constructability that enabled fast track construction to meet a 8-month construction programme.
- Maximized use of precast and prefabrication construction methods to reduce construction waste, environmental impacts, noise and air pollution nuisance to surroundings.

STRUCTURAL EXCELLENCE AWARD 2017

FINALIST

Relocation of the Court of Final Appeal to No. 8 Jackson Road

Winner: Architectural Services Department,
The Government of the HKSAR
Hong Kong Project - Heritage



Client: Judiciary of the HKSAR
Project Manager: Architectural Services Department,
The Government of the HKSAR
Structural Engineer: Architectural Services Department,
The Government of the HKSAR
Architect: Architectural Services Department,
The Government of the HKSAR
Main Contractor: Unistress Building Construction Limited
Project Heritage Consultant: LWK Conservation Ltd.

Project Description

The Building was constructed between 1900 and 1912 to house the then Supreme Court of Hong Kong. It was closed from 1978 to 1982 due to damages caused by MTR construction, and became the Legislative Council building in 1985. This project is to relocate the Court of Final Appeal to the Building after the removal of the Legislative Council to Tamar in 2011.

Project Features

- Preserve and showcase heritage features of the Building including the Dome with a bronze Tudor crown at the top, the Western pediment topped by the Statue of Justice, the traditional Chinese tiled roofs, the "Bridge of Sighs", the boiler-room-turned-architectural-heritage-gallery at the basement, etc.
- Reinstate / reinforce existing building structures including unique steel brackets to reinforce split timber roof purlines, safety metal net underneath hollow block rib slab and reinforce concrete base slab with up stand to prevent basement water leakage.
- Upgrade the building to contemporary standards with minimum alterations including addition of four lifts and a lift platform for users of the building and addition of mezzanine floor area to meet additional E&M and storage requirements.

FINALIST

Parisian Macao

Winner: AECOM Asia Company Limited

Mainland / Overseas Project



Client: Venetian Cotai Limited
Structural Engineer: AECOM Asia Company Limited
Architect: Aedas (Macao) Limited
Main Contractor: Hsin Cheong Engineering (Macao) Limited

Project Description

- The Parisian Macao has full array of resort facilities, including a 3,000 room Hotel, 5 levels of podium for entertainment, dining, shopping facilities and landscape garden.
- The hotel in Parisian Macao has 38 storeys and is at 160m tall. It connects to the adjacent hotel and casino via footbridges.
- With about half the size of the Eiffel Tower at Paris, the Eiffel Tower features restaurants and observation deck on the pedestrian bridge level at 40m above ground. The second observation deck at 140m is connected by lifts running up the core of the tower.

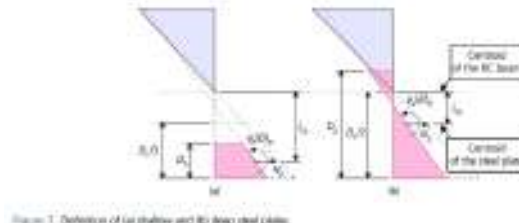
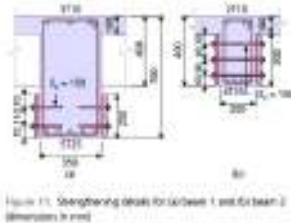
Project Features

- Hotel tower constructed by reinforced concrete with 38 storey and 160m tall.
- Regular one way beam and slab floor system with column grid at 20m by 20m in the podium floors for the shopping arcade.
- Eiffel Tower at about 160m tall with observation decks and food and beverage facility.
- Steel truss with span at 54m for the ballroom roof.
- Garden deck with water play facilities.
- Unitized curtain wall system with precast panel, window and finishes.
- Different types of foundation such as large diameter bored piles and precast prestressed concrete piles for the same site were used to meet the design requirement and optimize the construction cost.

FINALIST

Design of bolted side-plated reinforced concrete beams with partial interaction

R&D Award



Author(s): Ir Prof LO Sai-Huen, Ir Dr Ray SU Kai-Leung, Dr LI Ling-zhi and Mr JIANG Chang-Jiu
Publication Date of Paper: February 2016
Published Journal(s): the Proceedings of the Institution of Civil Engineers – Structures and Buildings Dynamics

Aims of the research / Paper abstract A brief on unusual features

Existing reinforced-concrete (RC) beams can be effectively strengthened by anchoring steel plates to the side faces of the beams using bolts, which is known as the bolted side-plating (BSP) technique. Previous studies have found that the performance of BSP beams is primarily controlled by the degree of partial interaction at the steel-RC interface, which can be conveniently quantified by the strain and curvature factors. In this paper, a new simplified flexural design procedure for BSP beams taking into account partial interaction is presented. Some optimum ranges of strain and curvature factors are first introduced to the flexural design of BSP beams. By ensuring the flexural capacity of a BSP beam is higher than the design moment, the preliminary size of steel plates and the arrangement of bolts can be determined. Following this, the maximum design slips and minimum design strain and curvature factors are calculated and back-checked to ensure the target flexural capacity of the BSP beam has been achieved. An example is presented to illustrate the effectiveness of the optimised design method for BSP beams, considering the effect of partial interaction under realistic loading conditions.

- Innovation and originality**
1. Bolt connections which are often more reliable and durable than adhesive bond connections are adopted for fixing the external steel plates to concrete beam.
 2. The use of side plates (rather than bottom plate) can avoid the bolt holes clashing with the main reinforcement and can facilitate the construction work.
 3. Using deep side plate to take up both flexural compression and tension can avoid over-reinforcement problem and prevent the strengthened beam from brittle failure under extreme loads.
 4. A simple and practical three-step design procedure accounting for the critical bolt slip effects (also known as partial interaction) is originally developed for optimum design of steel plates and anchor bolts.
- Engineering applications**
5. This method can be used for preliminary and detailed flexural strengthening design of RC beams.
 6. This method has been successfully applied to strengthening the Shanghai No.3 Department Store (上海市第三百貨商店) building in Shanghai.
 7. The contractor was satisfied with the construction convenience in comparison to CFRP bonding, and is willing to employ this technique in their future A&A works.
 8. The owner of the Shanghai No.3 Department Store is pleased about the conditions of the rehabilitated building.
- Sustainability**
9. Many existing buildings which are suffered from material deterioration or required for higher design loads due to A&A works can readily increase their flexural strength using this method. This method allowing the reuse of unfitted buildings by extending their service life can substantially reduce the construction cost and waste.
- Impacts**
10. The work reported in this paper has been cited 2 times shortly after its publication in 2016.
 11. The basic principles of this flexural design method have been further extended to the development of a theoretical model for shear retrofitting of RC beams using the BSP technique.

FINALIST

Electromagnetic energy harvesting from structural vibrations during earthquakes

R&D Award



Author(s): Wenai SHEN, Songye ZHU, Hongping ZHU, and You-li XU
Publication Date of Paper: September 2016
Published Journal(s): Smart Structures and Systems

Aims of the research / Paper abstract

Power outage frequently occurs during and after devastating earthquakes, which will disable structural monitoring, control, and alarm systems that serve crucial functions. This paper presents an innovative strategy of harvesting energy from earthquake-induced vibrations to power wireless sensor network. The energy harvesting function is realized by a novel macro-scale pendulum-type electromagnetic harvester (MPEH) installed in a building structure subjected to seismic ground motions, where the MPEH is connected to specially designed energy harvesting circuits with energy storage elements. This paper includes both analytical and experimental studies. In particular, this novel concept is validated through a series of shake table tests, in which a single-story steel frame model equipped with MPEH is subjected to representative seismic excitations. The energy output and energy harvesting efficiency are evaluated based on the analytical predictions and experimental results.

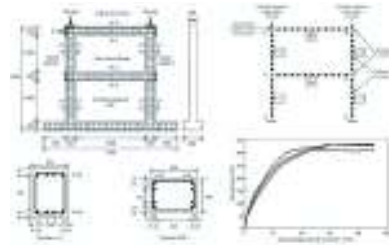
A brief on unusual features

Although energy harvesting techniques have attracted growing interest in the field of civil engineering, the research on how to harvest energy from earthquake-induced vibrations of structures is still at its infancy stage. Many questions (such as system design and performance prediction) remain unresolved and the corresponding experimental validations have never been reported. In view of this knowledge gap, the authors of this paper proposed and designed a novel device, termed macro-scale pendulum-type electromagnetic harvesters (MPEH), and then analytically investigated its behavior and experimentally validated its effectiveness. The results clearly demonstrated the prospects of the proposed MPEH for providing the crucial power during and after devastating earthquakes.

FINALIST

Nonlinear Multilevel Analysis of Reinforced Concrete Frames

R&D Award



Author(s): Pui Lam NG, Jeffery Yuet Kee LAM & Albert Kwok Hung KWAN
Publication Date of Paper: 2 February 2015
Published Journal(s): Engineering Structures and Technologies



Aims of the research / Paper abstract

Full range analysis of reinforced concrete (RC) members covering the post-crack and post-peak regimes is important for structural engineers to obtain the deformation response of structure and to identify critical structural members. When a RC member is subject to an increasing external load, the critical sections would exhibit cracking and/or softening. Due to stress relief effect in the proximity of crack opening and plastic hinging, unloading may occur at the adjacent regions. The variable stress states of discrete sections would lead to sectional variation of stiffness, which could not be accounted for by conventional structural analysis methods. Nonlinear multilevel analysis method for RC frames, whereby the frame members are divided into sub-elements and sectional analysis is utilised to evaluate stiffness degradation and strength deterioration, has been developed. At sectional level, the secant stiffness is determined from moment-curvature relation. Good capability to simulate nonlinearities of RC structures has been demonstrated.

A brief on unusual features

- A nonlinear multilevel analysis method for reinforced concrete (RC) frames has been developed. Member analysis is undertaken through the substructuring and static condensation technique. The sectional stiffness matrices obtained by sectional analysis are updated during load increments and numerical iterations.
- Unloading and reloading behaviour of concrete and steel reinforcement have been taken into consideration.
- It has good capability to simulate nonlinearities of RC structures that arise not only from the material constitutive modelling and stiffness degradation, but also from cracking and plastic hinging.
- The method is computationally efficient compared to nonlinear finite element analysis. Numerical examples of RC beam and frame specimens tested in the literature have been presented to demonstrate the applicability of the nonlinear multilevel analysis.
- The nonlinear multilevel analysis technique can be programmed as a computational tool and implemented fully automatically. Practitioners and analysts are able to employ this method for structural analysis and robustness design.

FINALIST

Progressive collapse mechanisms investigation of planar steel moment frames under localized fire

R&D Award



Author(s): Binhui Jiang, Guo-Qiang Li, Asif Usmani
Publication Date of Paper: 24 August 2015
Published Journal(s): Journal of Constructional Steel Research

Aims of the research / Paper abstract

In this paper, the possible progressive collapse mechanisms of planar steel frames when one column failed under elevated temperature was studied through extensive case studies. The numerical model was validated against experimental data and analysis results of other researchers. Three progressive collapse mechanisms were found, namely, cantilever beam mechanism, pull-in force induced mechanism and high load ratio member failure mechanism, of which the last one is a new discovery. To evaluate progressive collapse of planar steel frames under fire, the cantilever beam mechanism and the pull-in force induced mechanism should be checked when an outer column is heated, and the pull-in force induced mechanism and the high load ratio member failure mechanism need to be checked when an inner column is heated. Besides, the most adverse fire scenarios of planar steel moment frames were identified.

A brief on unusual features

Fire-induced collapse is a potentially serious threat to steel buildings. Most contemporary research on progressive collapse assessment of structures is associated with explosion or impact. In comparison, progressive collapse assessment of structures subjected to localized fires is a neglected topic. This paper is one of a handful attempts to provide useful insight into the progressive collapse of steel frame structures by systematically investigating the potential progressive collapse mechanisms in steel moment frames where one column is heated, and identifying the most adverse fire scenarios. The results of this paper provide a foundation for developing rational progressive collapse assessment methods for steel frame buildings in fire.

AWARDS

ISTRUCTE REPORT

Joint Structural Division (JSD) Awards 2016

JSD Awards are established to recognize the best Hong Kong candidates who scored the highest marks in the professional examinations including the HKIE Structural Examination and the Chartered Membership Examination of the IStructE.

Name of Examination

HKIE Structural Examination

IStructE Examination

Name of Awardee

Mr LEUNG Ho-hei

Ms O.Y. LAU

Best Reporter Awards 2016

Best Reporter Awards were introduced in November 2005 to encourage participation in the events organized by the JSD; to promote interests in the respective themes of the events; and to promote report writing skills among members.

Date

29 April 2016

25 August 2016

Winner

Ir Dr CAI Yan-cheng

Ms HO Fung-yuen

Report Title

Technical Meeting on Tubular Structures

Behaviour and Design of Prestressed Stayed Steel Columns

Best Student Awards 2016

Sponsored by structural engineering firms in Hong Kong, Best Student Awards have been announced to commend our undergraduates who demonstrated excellent overall academic results and high level of competence in structural engineering.

Sponsor

AECOM Asia Company Limited

Atkins China Limited

Siu Yin Wai & Associates Limited

T.K. Tsui - Gabriel Yu Limited

University

Hong Kong University of Science and Technology

The University of Hong Kong

The Hong Kong Polytechnic University

City University of Hong Kong

Awardee

Mr CHIU Wai-man

Mr LAU Chi-hin

Mr CHUNG Ka-leung

Ms CUI Jun-he



It is my great honour to serve our structural engineering community as IStructE Representative and Chairman of the IStructE Sub-Committee (Hong Kong Division). Council Members from Hong Kong include Ir Dr Eddie Lam (2014-2016), Ir Prof J S Kuang (2015-2017), Ir Ken Ng (2016), Ir K T Leung (2017) and Ir C K Lau (2017-2019). Further, Ir Prof K F Chung has been elected as Vice-President (2017-18).

We have been serving as the link between the IStructE and the HKIE for the best interest of our members. Reported below are major activities organized in 2016/2017 Session.

Chartered Membership Examination

In 2016, 139 Professional Review Interviews were conducted. We are anticipating 137 Professional Review Interviews (as of 20 April 2017) yet to be commenced and completed in this summer.

Two Chartered Membership Examinations were held on 8 July 2016 at The Hong Kong Baptist University with 109 candidates taking the examination and on 8 January 2017 at two examination centers, The Technology and Higher Education Institute of Hong Kong and The Hong Kong Polytechnic University, accommodating a total of 161 candidates.

Student membership

IStructE offers free membership for all students worldwide studying a civil or structural engineering-related degree/qualification at any level. Benefits include full online access of The Structural Engineer (IStructE's flagship publication), free online access to the Essential Knowledge Series and free online assessment of the Structural Behaviour Course.

With the support of 5 Student Liaison Officers from different universities and institutions in Hong Kong, there has been a steady and substantial growth of student members. On 16 March 2017, a seminar was also presented to civil/structural engineering students studying at The Hong Kong University of Science and Technology.

ISTRUCTE REPORT

LIST OF CHAIRMEN

Presidential Visit

The Presidential Visit was held on 15-18 November 2016. In the evening of 16 November 2016, the President, Mr Alan Crossman, delivered the Presidential Address and presented certificates to 4 newly elected fellows (Ir Edward CHAN Sai-cheong, Ir Mark CHEUNG Kwan-tar, Ir Dr Robin SHAM Siu-hung and Ir Prof TENG Jin-Guang) and 30 newly elected members. The Chief Executive, Mr Martin Powell, also updated us on the institutional news. As to the visit, the President lectured to students and met staff of the Department of Civil and Environmental Engineering, The Hong Kong University of Science and Technology, and talked to fellow structural engineers of AECOM and Architectural Services Department of the HKSAR Government. The Presidential Visit was concluded with a site visit to a project of AECOM.

Final Remarks

I would like to take this opportunity to thank the IStructE Sub-Committee and Committee Members of the Joint Structural Division for their devotion in organizing the various meaningful activities. In particular, I would like to express my deepest appreciation to all senior members who conducted the Professional Review Interviews and those who assisted in the Chartered Membership Examinations and the Presidential Visit.



Ir Prof Paul PANG

IStructE Hong Kong Representative

12 May 2017

Session	Name of Chairman	
1 st 79/80	Ir TSUI Tack-kong	
2 nd 80/81	Ir Prof Fred NG Sai-ho	
3 rd 81/82	Ir Dr Raymond HO Chung-tai	20 th 98/99 Ir Prof James LAU Chi-wang
4 th 82/83	Ir Andrew NGAI Bick-yau	21 st 99/00 Ir Kenneth LAU Kwong-hon
5 th 83/84	Ir David George HOLMES	22 nd 00/01 Ir Prof Reuben CHU Pui-rwan
6 th 84/85	Ir Brian POON Hon-yin	23 rd 01/02 Ir Prof Paul PANG Tat-choi
7 th 85/86	Ir David CHAN Wing-keung	24 th 02/03 Ir Johnny FAN Siu-ray
8 th 86/87	Ir Barry John STUBBINGS	25 th 03/04 Ir Helen KWAN Po-jen
9 th 87/88	Ir Dr LAW Kwok-sang	26 th 04/05 Ir Joseph MAK Yiu-wing
10 th 88/89	Ir Patrick YIM Chun-nam	27 th 05/06 Ir Prof CHOY Kin-kuen
11 th 89/90	Ir Dr Joseph CHOW Ming-kuen	28 th 06/07 Ir CHENG Yan-kee
12 th 90/91	Ir Bruce Malcolm FOX	29 th 07/08 Ir KWAN Kin-kei
13 th 91/92	Ir TSE Pak-kin	30 th 08/09 Ir CHAN Siu-tack
14 th 92/93	Ir Ricky SO Yau-chi	31 st 09/10 Ir LAU Chi-kin
15 th 93/94	Ir Hugh WU Sai-him	32 nd 10/11 Ir Dr KOON Chi-ming
16 th 94/95	Ir Ignatius LAU Yik-sum	33 rd 11/12 Ir Dr Eddie LAM Siu-shu
17 th 95/96	Ir WONG Chi-ming	34 th 12/13 Ir Gabriel YU Lin-keung
18 th 96/97	Ir CHEUNG Kwok-ming	35 th 13/14 Ir Prof CHAN Siu-lai
19 th 97/98	Ir Prof KO Jan-ming	36 th 14/15 Ir Martin TSOI Wai-tong
		37 th 15/16 Ir Ken NG Kin-shing
		38 th 16/17 Ir LEUNG Kwok-tung, JP

