

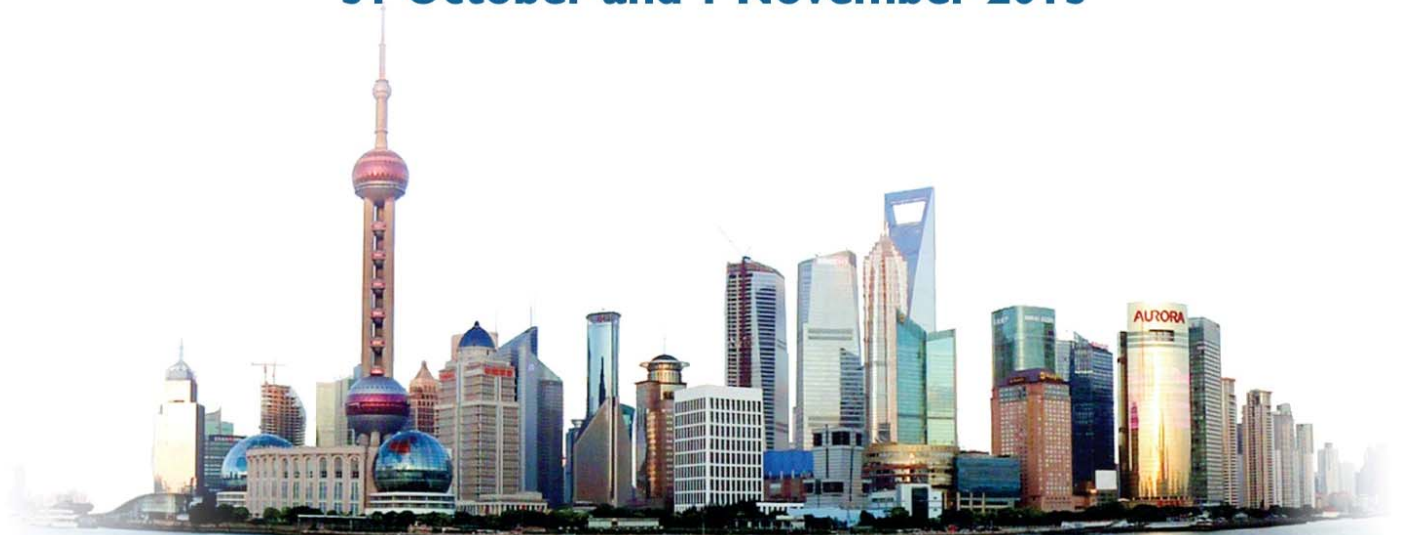
*The Institution
of Structural
Engineers*

IStructE Conference on Structural Engineering in Hazard Mitigation 2013



同濟大學
TONGJI UNIVERSITY

**Tongji University, Shanghai
31 October and 1 November 2013**



P R O G R A M M E

Jointly organized by

The Institution of Structural Engineers
Tsinghua University **Tongji University**
and
The IStructE China Group

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The Conference

The IStructE Conference on Structural Engineering in Hazard Mitigation is jointly organized by

- the Institution of Structural Engineers (www.istructe.org),
- Tongji University (www.tongji.edu.cn),
- Tsinghua University (www.tsinghua.edu.cn), and
- the IStructE China Group.

The Conference is held in Beijing on 28 and 29 October 2013, and in Shanghai on 31 October and 1 November 2013 featuring keynote lectures as well as presentations in parallel themed-based sessions. The IStructE Gold Medal Address 2013 is held in Shanghai as part of the Conference.

*The Institution
of Structural
Engineers*



The IStructE

The Institution of Structural Engineers (www.istructe.org) is the world's largest membership organisation dedicated to the art and science of structural engineering. The Institution has over 27,000 members working in 105 countries around the world. The Institution is an internationally recognised source of expertise and information concerning all issues that involve structural engineering and public safety within the built environment.

The Institution has three core values to support the roles of the structural engineers around the world:

- Professional standards striving for continued technical excellence; advancing safety and innovation across the built environment.
- Celebrating excellence and promoting greater understanding of the structural engineering profession by sharing the achievements and milestones of the industry with the public.
- Sustainability supporting structural engineers as they protect, influence and advance environmental development responsibly.

The IStructE China Group was formally established in 2002. To better represent IStructE members and their interests in the major cities of China, three sub-groups were developed, and they are currently based in Beijing, Shanghai and Shenzhen.

Conference Advisory Committee

Mr. Yan-Kee Cheng	President, IStructE
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Mr. Ian Firth	Vice President, IStructE
Prof. Tim Ibell	Vice President, IStructE
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Programme at a Glance

Date	30 Oct <i>Wednesday</i>	<i>Day 1</i> 31 Oct <i>Thursday</i>	<i>Day 2</i> 1 Nov <i>Friday</i>
		Tongji University Shanghai	
Morning	<i>Registration</i>	Opening Ceremony	Sessions I-A, I-B and I-C
		Keynote Presentations	
Afternoon		Keynote Presentations	Sessions II-A, II-B and II-C
		Conference Reception	
		Gold Medal Address	

Registration Desk

Wednesday 30 October 2013

9:00 am to 5:00 pm

The Lobby, Tongji Architectural Design (Group) Co., Ltd.,

No.1230, Siping Road, Shanghai, China

Thursday 31 October 2013

8:00 am to 9:00 am

The Lobby, Tongji Architectural Design (Group) Co., Ltd.,

No.1230, Siping Road, Shanghai, China

Friday 1 November 2013

8:00 am to 9:00 am

Room C201, Tongji Sino-France Centre

No.1239, Siping Road, Shanghai, China

Schedule of Presentations - Keynote Presentations

31 October 2013, Thursday, Lecture Hall, Tongji Architectural Design (Group) Co., Ltd.

Time	Programme
08:00-09:00	Registration
09:00-10:00	Opening Ceremony
	<p><i>Plenary Session 1</i> <i>Chair : Prof. Guo-Qiang LI</i></p> <p>Prof. Yi-Yi CHEN <i>State Key Laboratory of Disaster Reduction in Civil Engineering, Tongji University, Shanghai, China.</i></p> <p>The Concept of 'Buckling Hinges' in H-shaped Steel Members with Non-plastic Elements and Its Usage in Seismic Design</p>
10:00-10:30	Coffee Break
10:30-12:00	<p><i>Plenary Session 2</i> <i>Chair : Prof. Kwok-Fai CHUNG</i></p> <p>Prof. Andrew WHITTLE <i>Department of Civil and Environmental Engineering, Massachusetts Institute of Technology, U.S.A.</i></p> <p>Design and Performance of Coastal Flood Protection Systems</p> <p>Dr. Fahim SADEK <i>Engineering Laboratory, National Institute of Standard and Technology, USA.</i></p> <p>Structural Design for Disaster Resilience</p>
12:00-13:30	Lunch Break
13:30-15:00	<p><i>Plenary Session 3</i> <i>Chair : Prof. Guo-Qiang LI</i></p> <p>Prof. Ahmed ELGHAZOULI <i>Department of Civil and Environmental Engineering, Imperial College London, U.K.</i></p> <p>Structural Robustness of Steel-Composite Structures Under Extreme Loads</p> <p>Prof. Nelson LAM <i>Department of Infrastructure Engineering, University of Melbourne, Australia.</i></p> <p>Displacement Based Seismic Design Principles as Applied to Regions of Low and Moderate Seismicity</p>
15:00-16:30	Coffee Break Coffee served from 15:15 to 16:15.
16:30-17:30	Gold Medal Presentation & Address

Schedule of Presentations - Theme-based Sessions

1 November 2013, Friday, Tongji Sino-France Centre

Time	Room C201	Room C301	Room C401
Morning Session	<p>Session I -A Recent Developments of Seismic Engineering Design</p> <p>Chair: Prof. Xi-Lin LU</p>	<p>Session I -B Modern Structural Engineering Against Fire and Blasts</p> <p>Chair: Prof. Guo-Qiang LI</p>	<p>Session I -C Structural Health Monitoring and Vibration Control of Engineering Structures</p> <p>Chair: Dr. Paul Heung-Fai LAM Co-Chair: Dr. Tao YIN</p>
	<p><i>Presentation 1</i> Prof. Stephen MAHIN</p>	<p><i>Presentation 1</i> Prof. Yong DU</p>	<p><i>Presentation 1</i> Prof. You-Lin XU</p>
	<p><i>Presentation 2</i> Prof. Kazuhiko KASAI</p>	<p><i>Presentation 2</i> Dr. Pei-Jun WANG</p>	<p><i>Presentation 2</i> Dr. Paul Heung-Fai LAM</p>
	<p><i>Presentation 3</i> Dr. Jie LI</p>	<p><i>Presentation 3</i> Dr. Jian JIANG</p>	<p><i>Presentation 3</i> Dr. Hai-Jun ZHOU</p>
10:30-10:50	Coffee Break		
10:50-12:00	<p><i>Presentation 4</i> Prof. Huan-Jun JIANG and Prof. Xi-Lin LU</p>	<p><i>Presentation 4</i> Dr. Su-Wen CHEN</p>	<p><i>Presentation 4</i> Dr. Ching Tai NG</p>
	<p><i>Presentation 5</i> Prof. Ching-Shyang CHEN</p>	<p><i>Presentation 5</i> Prof. Chun-lin LIU</p>	<p><i>Presentation 5</i> Dr. Feng-Liang ZHANG</p>
	<p><i>Presentation 6</i> Prof. Zhi-Guang ZHOU</p>	<p><i>Presentation 6</i> Dr. Ho-Cheung HO</p>	<p><i>Presentation 6</i> Dr. Tao YIN</p>
12:00-13:30	Lunch Break		

Schedule of Presentations - Theme-based Sessions

1 November 2013, Friday, Tongji Sino-France Centre (continued)

Afternoon Session	Session II -A Modern Bridge Engineering in Hazard Mitigation Chair: Prof. Ai-Rong CHEN	Session II -B Modern Structural Engineering in Super-highrise Buildings Chair: Prof. Jie-Min DING	Session II-C Modern Structural Engineering Design using Eurocodes Chair: Prof. Kwok-Fai CHUNG
	13:30-14:15	<i>Presentation 1</i> Prof. Mitsuyoshi AKIYAMA	<i>Presentation 1</i> Prof. Jie-Min DING
	<i>Presentation 2</i> Prof. F. Necati CATBAS	<i>Presentation 2</i> Prof. Jian-Long ZHOU	<i>Presentation 2</i> Prof. Ahmed ELGHAZOULI
14:15-14:45	Coffee Break		
14:45-16:15	<i>Presentation 3</i> Prof. Fathy SAAD	<i>Presentation 3</i> Prof. Jian GONG	<i>Presentation 3</i> Prof. Nelson LAM
	<i>Presentation 4</i> Prof. Xin RUAN	<i>Presentation 4</i> Prof. Qi-Lin ZHANG	<i>Presentation 4</i> Prof. Dennis LAM
	<i>Presentation 5</i> Prof. Ru-Jin MA	<i>Presentation 5</i> Prof. Xin ZHAO	<i>Presentation 5</i> Prof. Kwok-Fai CHUNG
		<i>Presentation 6</i> Prof. Lian-Jin BAO	

Themed-based Session I-A

Recent Developments of Seismic Engineering Design

1 Nov 2013, 9:00 - 12:00 (C201)

Chair: Prof. Xi-Lin LU
Tongji University

1. Prof. Stephen MAHIN, University of California, Berkeley, California USA.
Using Performance-Based Design to Improve the Life Cycle Costs of Structures
2. Prof. Kazuhiko KASAI, Structural Engineering Research Centre, Tokyo Institute of Technology, Japan.
Seismic Upgrade Projects For A Steel Tall Building Based On Its Responses Recorded During 2011 East Japan Earthquake
3. Dr. Jie LI, State Key Laboratory of Disaster Reduction in Civil Engineering, Tongji University, China.
Advances in Modeling of Engineering Seismic Ground Motion and Its Applications
4. Prof. Huan-Jun JIANG and Prof. Xi-Lin LU, Research Institute of Structural Engineering and Disaster Reduction, Tongji University, China.
Introduction to Updated Code for Seismic Design of Buildings in Shanghai
5. Prof. Ching-Shyang CHEN, Shanghai Xue Hui Anti-Earthquake Technology Consulting Co., Ltd., China.
Relevant Issues of Energy Dissipation Technology Application on High-rise Buildings in China
6. Prof. Zhi-Guang ZHOU, Research Institute of Structural Engineering and Disaster Reduction, Tongji University, Shanghai, China
Effects Of Soil-structure Interaction On Seismic Response Of Isolated Nuclear Power Plant

Themed-based Session I-B

Modern Structural Engineering Against Fire and Blasts

1 Nov 2013, 9:00 - 12:00 (C301)

Chair: Prof. Guo-Qiang LI
Tongji University

1. Prof. Yong DU, Nanjing University of Technology, China.
Fire-resistance Design Strategies for Large-volume Space with Steel Spatial Structures Exposed to Localized Fires
2. Dr. Pei-Jun WANG, Shandong University, China.
Experimental and Numerical Studies on Restrained Steel Columns with Non-Uniform Temperature Distribution Across Sections in a Fire
3. Dr. Jian JIANG, College of Civil Engineering, Tongji University, Shanghai, China
Development of Structural Fire Engineering in Research and Practice
4. Dr. Su-Wen CHEN, Tongji University, China.
Investigation Of Blast Resistance Of Point-supported Laminated Glass Curtain Wall
5. Chun-lin LIU, School of Civil Engineering, Tongji University, China
Security and Protective Design for Water Facility
6. Dr. Ho-Cheung HO, Department of Civil and Environmental Engineering, Hong Kong Polytechnic University, Hong Kong SAR, China
Restrained Thermal Expansion of Unprotected Steel Trusses at Elevated Temperatures

Themed-based Session I-C

Structural Health Monitoring and Vibration Control of Engineering Structures
1 Nov 2013, 9:00 - 12:00 (C401)

Chair: Dr. Paul Heung-Fai LAM
City University of Hong Kong
Co-Chair: Dr. Tao YIN
Wuhan University

1. Prof. You-Lin XU, Hong Kong Polytechnic University, Hong Kong SAR, China.
SHMS-based Prognosis Tool and Rating System of Long-Span Suspension Bridges
2. Dr. Paul Heung-Fai LAM, City University of Hong Kong, Hong Kong SAR, China.
Structural Model Updating of a Steel Truss System of a Building Structure Based on Ambient Vibration Data
3. Dr. Hai-Jun ZHOU, Shenzhen University, China.
Vibration frequency and damping of two parallel cables with a cross-tie and dampers
4. Dr. Ching Tai NG, School of Civil, Environmental & Mining Engineering, The University of Adelaide, Australia.
Quantitative identification of damages in beams using longitudinal guided wave: An experimental study
5. Dr. Feng-Liang ZHANG, City University of Hong Kong, Hong Kong SAR, China
Ambient Vibration Tests And Operational Modal Analysis Of Field Structures
6. Dr. Tao YIN, Wuhan University, China
Structural Damage Detection With Incomplete Modal Data Based On The Bayesian Probabilistic Approach

Themed-based Session II-A

Modern Bridge Engineering in Hazard Mitigation

1 Nov 2013, 13:30 - 16:30 (C201)

Chair: Prof. Ai-Rong CHEN

Tongji University

1. Prof. Mitsuyoshi AKIYAMA, Waseda University, Japan.
Life-cycle Reliability of Concrete Structures under Extreme Events and Hazards Associated with Continuous Deterioration
2. Prof. F. Necati CATBAS, University of Central Florida, USA.
Use of Family of Models to Incorporate Uncertainty: A Case Study with a Long Span Bridge
3. Prof. Fathy SAAD, Ain Shams University, Cairo, Egypt.
Sustainable Prestressed Concrete Innovative System: Applications of CFRP Strips in Precast Concrete Structures
4. Prof. Xin RUAN, Tongji University, China.
Risk Management Strategy for Long Span Bridge during Operation Stage
5. Prof. Ru-Jin MA, Tongji University, China.
Structural Performance of Simple-supported Bridge under Blast Loading

Themed-based Session II-B

Modern Structural Engineering in Super-highrise Buildings
1 Nov 2013, 13:30 - 16:30 (C301)

Chair: Prof. Jie-Min Ding
Tongji Architectural Design (Group) Co., Ltd., China.

1. Prof. Jie-Min DING, Tongji Architectural Design (Group) Co., Ltd., China.
Performance-based Seismic Design Principles and Evaluation of Shanghai Tower
2. Prof. Jian-Long ZHOU, East China Architectural Design & Research Institute, China.
Practice in Structural Design of High-rise Buildings and Discussions on Critical Issues
3. Prof. Jian GONG, Shanghai Construction Group Co. Ltd., China.
Key Technologies in the Construction of Super High-rise Buildings
4. Prof. Qi-Lin ZHANG, Tongji University, China.
Numerical Analysis and Monitoring Research for Construction Progress of Shanghai Tower
5. Prof. Xin ZHAO, Tongji Architectural Design (Group) Co., Ltd., China.
Long-period Earthquake Action and Seismic Responses of High-rise Building Structures
6. Prof. Lian-Jin BAO, East China Architectural Design & Research Institute, China
Structural Design of Shenfu Circle

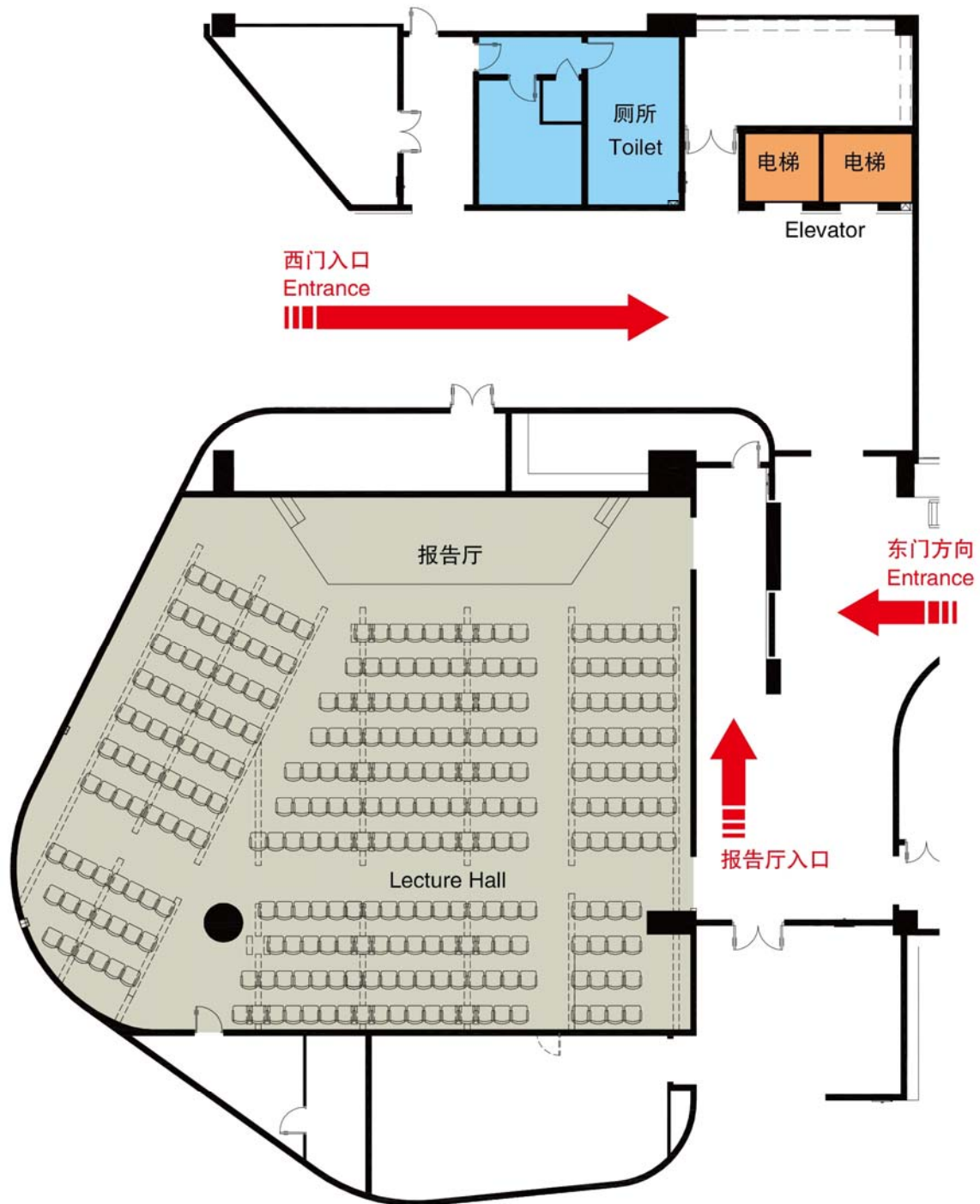
Themed-based Session II-C

Modern Structural Engineering Design using Eurocodes
1 Nov 2013, 13:30 - 16:30 (C401)

Chair: Prof. Kwok-Fai Chung
The Hong Kong Polytechnic University

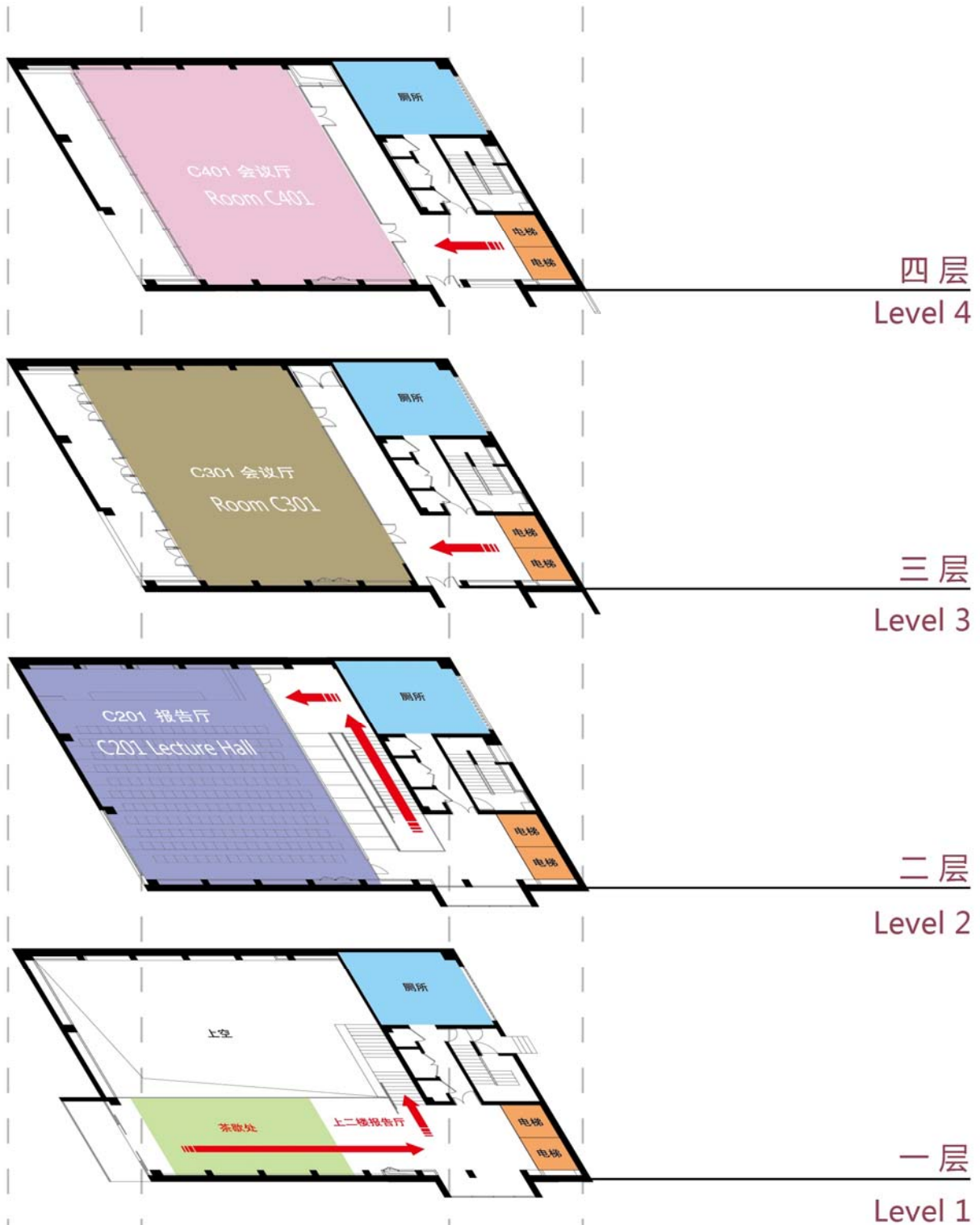
1. Dr. Sing-Ping CHIEW, Nanyang Technological University, Singapore.
Impact of Structural Eurocodes on Steel and Composite Structures in Singapore
2. Prof. Ahmed ELGHAZOULI, Imperial College London, UK.
Seismic Design of Building Structures to Eurocode 8
3. Prof. Nelson LAM, The University of Melbourne, Australia.
Earthquake Loading Model in the Proposed National Annex To Eurocode 8 for Peninsular Malaysia
4. Prof. Dennis LAM, Bradford University, UK.
Demountable Shear Connectors for Sustainable and Robust Composite Structures
5. Prof. Kwok-Fai CHUNG, Hong Kong Polytechnic University, Hong Kong SAR, China.
Harmonized Member Buckling Design in Structural Eurocodes

Floor Plan of
The Lecture Hall, Tongji Architectural Design (Group) Co., Ltd.
31 October 2013, Thursday



 设计院一楼报告厅 Lecture Hall	 电梯 Elevator
 厕所 Toilet	

Floor Plan of
Tongji Sino-France Centre
1 November 2013, Friday



 茶歇处 Tea break	 C301 会议室 C301 MeetingRoom	 厕所 Toilet
 C201 报告厅 C201 Lecture Hall	 C401 会议室 C401 MeetingRoom	 电梯 Elevator

General Information

Venue

- *31 October, 2013*

Tongji Architectural Design (Group) Co., Ltd.
No.1230, Siping Road, Shanghai, China

Lecture Hall:

Opening Ceremony, Keynote presentations, Gold Medal Address

Lobby:

Conference Reception

- *1 November, 2013*

Tongji Sino-France Centre
No.1239, Siping Road, Shanghai, China

Rooms C201, C301 and C401:

Parallel Theme-based Sessions

Language

English is the official language and is the only language to be used for presentations and publications. There will be no translation into other languages.

