



## Technical Program

### Friday, November 17, 2017

- 07:50-08:15** 1 ) For participants staying in the Days Hotel Fortune Shanghai Bund, a charter bus will pick you up from outside of the Lobby @7:50am  
2 ) Others (by walking): Workshop receptionists will be in the lobby of your hotel to provide directions to the workshop venue from 8:00am to 8:15am
- 08:30-09:00** **Opening Ceremony**  
**Auditorium Room 410, 4F, Zonghe Building, Tongji University**  
1239 Siping Road, Yangpu District, Shanghai  
**Chair: Jianzhong Li**, Organizing Committee Chair (Tongji University, China)
- 08:30-08:50 **Introduction to International Association of Bridge Earthquake Engineering (IABEE)**  
**W. Phillip Yen**, Chair of International Association of Bridge Earthquake Engineering (IABEE)
- 08:50-09:00 **Welcome Address**  
**Xianglin Gu**, Vice President of Tongji University, China
- 09:00-09:30** **Group Photo** Will be taken in front of Zonghe Building
- 09:30-10:30** **Plenary Session 1**  
**Auditorium Room 410, 4F, Zonghe Building, Tongji University**  
**Chair: Yoshiaki Goto** (Nagoya Institute of Technology, Japan)  
**Note: 25-minute oral presentation; 5-minute Q/A.**
- 09:30-10:00 Seismic Performance of a Full-size Polypropylene Fiber Reinforced Cement Composite Bridge Column based on E-Defense Shake Table Experiments  
**Kazuhiko Kawashima** (Tokyo Institute of Technology, Japan)
- 10:00-10:30 A New Smooth Hysteretic Model and Capacity-Based Displacement Spectrum for RC Bridge Columns  
**Kuochun Chang** (National Taiwan University, Taiwan, China, 台湾大学)
- 10:30-11:00** **Coffee Break**  
**Corridor, 4F, Zonghe Building, Tongji University**



**11:00-12:00 Plenary Session 2**

**Auditorium Room 410, 4F, Zonghe Building, Tongji University**

**Chair: David Sanders (University of Nevada at Reno, USA)**

**Note: 25-minute oral presentation; 5-minute Q/A**

11:00-11:30 Improving the seismic resilience of bridges using innovative experimental technologies

**Ian G Buckle** (University of Nevada at Reno, USA)

11:30-12:00 Introduction to guide specifications for seismic design of highway bridges of China

**Guangwu Tang** (Chongqing Communications Technology Research & Design Institute Co., Ltd, China)

**12:00-13:30 Lunch**

**XUEYUAN Cafeteria (2F), Tongji University 学苑二楼自选餐厅**

**13:30-15:10 Parallel Session 1A**

**Room 402, 4F, Zonghe Building, Tongji University**

**Chair: David T. Lau** (Carleton University, Canada)

**Note: 15-minute oral presentation; 5-minute Q/A.**

13:30-13:50 Study on seismic performance of a new precast segmental bridge piers constructed with modular stacking

**Yuchi Sung** (National Taipei University of Technology, Taiwan, China, 台北科技大学)

13:50-14:10 Study on the broadband-vibration absorption and the displacement limit of bridges with rubber bearings under the near-fault earthquake

**Wancheng Yuan** (Tongji University, China)

14:10-14:30 Research on the seismic behavior of the viaduct and subway structure

**Kehai Wang** (Research Institute of Highway, MOT, China)

14:30-14:50 Experimental study on the mechanism and countermeasures of coastal bridges under tsunami-induced loading due to earthquake

**Qingli Meng** (Southwest University of Science and Technology, China)



14:50-15:10 A 3-dimensional segment model applicable to the analysis of dynamic behaviors of continuous bridge system with CFT piers  
**Ebisawa Takemasa** (Nagoya Institute of Technology, Japan)

**13:30-15:10 Parallel Session 1B**

**Room 404, 4F, Zonghe Building, Tongji University**

**Chair: Zhouhong Zong** (Southeast University, China)

**Note: 15-minute oral presentation; 5-minute Q/A**

13:30-13:50 Efficacy of post-mainshock FRP/steel repaired RC bridge columns subjected to aftershocks

**Genda Chen** (Missouri University of Science and Technology, USA)

13:50-14:10 Next generation sustainable cementitious material (Geopolymer)–synthesis, characterization, modeling, and its applications in bridge engineering

**Mingjiang Tao** (Worcester Polytechnic Institute, USA)

14:10-14:30 Study on the seismic behaviors of the bridges with integral abutments & Study on the seismic behavior of the high-performance piers of sea cross bridges

**Qihong Zhao** (Tianjin University, China)

14:30-14:50 Seismic risk probability assessment of offshore bridge based on the material's degradation

**Yin Gu** (Fuzhou University, China)

14:50-15:10 Effects of friction action on seismic isolation systems

**Biao Wei** (Central South University, China)

**13:30-15:10 Parallel Session 1C**

**Room 304, 3F, Zonghe Building, Tongji University**

**Chair: Weichiang Pang** (Clemson University, USA)

**Note: 15-minute oral presentation; 5-minute Q/A**

13:30-13:50 Adaptive Signal Decomposition and Reconstruction for Bridge Dynamic Testing

**Deshan Shan** (Southwest Jiaotong University, China)

13:50-14:10 Seismic design of rocking double-column bridge with replaceable energy dissipating fuses and its application

**Qiang Han** (Beijing University of Technology, China)



- 14:10-14:30 Benchmark rail RC bridge / slab ballastless track / high-speed train systems subjected to ground motions  
**Lingkun Chen** (Southwest Jiaotong University, China)
- 14:30-14:50 Seismic performance evaluation and equivalent energy-based design procedure of high speed rail bridge  
**Wei Guo** (Central South University, China)
- 14:50-15:10 Shaking Table Performance of Precast Segmental Concrete Double-Column Piers  
**Zhanghua Xia** (Fuzhou University, China)
- 15:10-15:25 Coffee Break**  
**Corridor, 4F, Zonghe Building, Tongji University**
- 15:25-17:05 Parallel Session 2A**  
**Room 402, 4F, Zonghe Building, Tongji University**  
**Chair: Yuchen Ou** (National Taiwan University, Taiwan, China)  
**Note: 15-minute oral presentation; 5-minute Q/A**
- 15:25-15:45 Seismic evaluation of historic stone masonry arch bridges  
**Oguz C. Celik** (Istanbul Technical University, Turkey)
- 15:45-16:05 Seismic analysis of the rocking self-centering double column bridge bents  
**Zhiguo Sun** (Institute of Disaster Prevention Science and Technology, China)
- 16:05-16:25 Seismic response of single-frame and multi-frame skewed reinforced concrete bridges with and without shear keys  
**Mohamed A Moustafa** (University of Nevada at Reno, USA)
- 16:25-16:45 An experimental study on the methodology of axial prestress force identification for bridge structures  
**Chunchung Chen** (National Center for Research on Earthquake Engineering, Taiwan, China, 台湾地震工程研究中心)
- 16:45-17:05 Development of a real-time scour monitoring system for bridge safety evaluation  
**Tzukang Lin** (National Chiao Tung University, Taiwan, China, 台湾交通大学)



**15:25-17:05 Parallel Session 2B**

**Room 404, 4F, Zonghe Building, Tongji University**

**Chair: Deshan Shan** (Southwest Jiaotong University, China)

**Note: 15-minute oral presentation; 5-minute Q/A.**

15:25-15:45 Theoretical and experimental study on seismic performances of hollow- section concrete piers

**Changjiang Shao** (Southwest Jiaotong University, China)

15:45-16:05 The application of distributed synchronous data acquisition in large span structure

**Zhixiang Zhou** (National Instruments, USA)

16:05-16:25 Studies on a new type of side block for bridge bearing

**Guangfeng Zhang** (Highway Technology Research Center, Japan)

16:25-16:45 Study on the failure mechanism of small-radius curved bridges under the earthquake

**Chiyu Jiao** (Beijing University of Civil Engineering and Architecture, China)

16:45-17:05 Displacement Coefficient Method for Bridge subjected to Pulse-Like Ground Motions

**Kuangyen Liu** (National Cheng Kung University, Taiwan, China, 台湾成功大学)

**15:25-17:05 Parallel Session 2C**

**Room 304, 3F, Zonghe Building, Tongji University**

**Chair: Mingjiang Tao** (Worcester Polytechnic Institute, USA)

**Note: 15-minute oral presentation; 5-minute Q/A.**

15:25-15:45 Force-displacement decoupled control on multiple-degree-of-freedom test of a curved bridge pier

**Huimeng Zhou** (Institute of Engineering Mechanics, CEA, China)

15:45-16:05 Seismically resilient bridge systems via novel response mechanisms and materials

**Petros Sideris** (Texas A&M University, USA)

16:05-16:25 Seismic evaluation and prediction of self-centering precast segmental CFST bridge columns

**Junfeng Jia** (Beijing University of Technology, China)



- 16:25-16:45 Effect of surface gravity waves on the seismic response of deep-water cylindrical bridge piers  
**Kai Wei** (Southwest Jiaotong University, China)
- 16:45-17:05 Displacement-based seismic design procedure for multi-column bridge bents with extended pile-shafts  
**Shintai Song** (National Chung Hsing University, Taiwan, China, 台湾中兴大学)
- 18:00-20:00 Dinner Reception: SANHAOWU Cafeteria, Tongji University 三好坞餐厅**  
Welcome address: Limin Sun, Cheung Kong Scholar Chair Professor, Director of Department of Bridge Engineering, Tongji University

### Saturday, November 18, 2017

- 08:00-9:30 Travel to Jiading Campus by Charter Bus**  
**Pick-up spots: 1) Kingswell Hotel Tongji @8:00am**  
**2) Days Hotel Fortune Shanghai Bund @8:00am**
- 09:30-10:30 Plenary Session 3**  
**Room 405, International Meeting Center, Jiading Campus, Tongji**  
**Chair: Bijan Khaleghi** (Washington State Department of Transportation, USA)  
**Note: 25-minute oral presentation; 5-minute Q/A.**
- 09:30-10:00 Experiences and trends in seismic design of bridges  
**Gian Michele Calvi** (IUSS Pavia and Eucentre Foundation, Italy)
- 10:00-10:30 Field and experimental investigation on seismic performance of long span rigid frame bridge with super high piers  
**Xun Guo** (Institute of Disaster Prevention Science and Technology, China)
- 10:30-11:00 Coffee Break**  
**Corridor, 4F, International Meeting Center, Jiading Campus, Tongji**
- 11:00-12:30 Plenary Session 4**  
**Room 405, International Meeting Center, Jiading Campus, Tongji**  
**Chair: Genda Chen** (Missouri University of Science and Technology, USA)  
**Note: 25-minute oral presentation; 5-minute Q/A.**



- 11:00-11:30 Seismic damage susceptibility of bridge piers with different high performance cementitious materials in plastic hinges  
**M. Saiid Saiidi** (University of Nevada at Reno, USA)
- 11:30-12:00 Resilient damage resistant bridge piers: from theory to practice  
**Alessandro Palermo** (University of Canterbury, New Zealand)
- 12:00-12:30 Seismic design of pile-supported bridges in complex geotechnical conditions  
**Aijun Ye** (Tongji University, China)
- 12:30-13:30 Lunch with lunchbox**  
**Room 405, International Meeting Center, Jiading Campus, Tongji**
- 13:30-14:50 Technical Session 1**  
**Room 405, International Meeting Center, Jiading Campus, Tongji**  
**Chair: Oguz C. Celik** (Istanbul Technical University, Turkey)  
**Note: 15-minute oral presentation; 5-minute Q/A.**
- 13:30-13:50 Design Implications for Long Duration Earthquakes  
**David Sanders** (University of Nevada at Reno, USA)
- 13:50-14:10 Study on the seismic behavior of continuous composite-girder bridges with the corrugated steel webs under strong earthquake  
**Zhouhong Zong** (Southeast University, China)
- 14:10-14:30 Risk assessment of coastal bridges under multiple natural hazards- earthquakes and tropical cyclones  
**Weichiang Pang** (Clemson University, USA)
- 14:30-14:50 Seismic design of RC bridge bents with BRBs as structural fuse  
**Dongsheng Wang** (Hebei University of Technology, China)
- 14:50-15:05 Coffee Break**  
**Corridor, 4F, International Meeting Center, Jiading Campus, Tongji**
- 15:05-16:05 Technical Session 2**  
**Room 405, International Meeting Center, Jiading Campus, Tongji**  
**Chair: Yuchi Sung** ( National Taipei University of Technology, Taiwan, China, 台北科技大学)  
**Note: 15-minute oral presentation; 5-minute Q/A.**
- 15:05-15:25 Recent innovations in bridge seismic design and construction  
**Bijan Khaleghi** (Washington State Department of Transportation, USA)



- 15:25-15:45 Improving the Seismic Performance of Existing Bridge Structures using Self-centering Dampers  
**David T. Lau** (Carleton University, Canada)
- 15:45-16:05 Effects of design parameters of reinforced concrete bridge columns on seismic residual displacements  
**Yuchen Ou** (National Taiwan University, Taiwan, China, 台湾大学)
- 16:05-16:35 Discussion**  
**Room 405, International Meeting Center, Jiading Campus, Tongji**
- 16:35-17:35 Lab Visit**
- 18:00-20:00 Closing Ceremony & Banquet**  
**Crowne Plaza Shanghai Anting 上海颖奕皇冠假日酒店**  
No. 6555 Boyuan Road, Jiading District, Shanghai

### Sunday, November 19, 2017

- 08:00-11:00 Travel to Hutong Changjiang Bridge Site by Charter Bus**  
**Pick-up spots: 1) Kingswell Hotel Tongji @8:00am**  
**2) Days Hotel Fortune Shanghai Bund@8:00am**
- 11:00-12:00 Project introduction of Hutong Changjiang Bridge**  
**Bridge Engineering Management Headquarters**
- 12:00-13:00 Lunch Buffet**  
**Bridge Engineering Management Headquarters**
- 13:00-15:00 Site Visit**  
**Hutong Changjiang Bridge Site**
- 15:00-18:30 Traveling**  
**Return to Tongji University by charter bus**
- 18:30-20:00 Dinner**  
**ZHICHAO Restaurant 志超食府**