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-dementional 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: Zhuhong 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
Qiuhong 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

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 Khaeghi (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 上海顥奕皇冠假日酒店  
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