

# 7<sup>th</sup> CUEE and 5<sup>th</sup> ICEE Joint Conference

March 3<sup>rd</sup>-5<sup>th</sup>, 2010

*Promoting International Collaboration  
at Earthquake Engineering Frontiers and in Mitigation Practices*

## 7<sup>th</sup> International Conference on Urban Earthquake Engineering & 5<sup>th</sup> International Conference on Earthquake Engineering

**Venue :** Tokyo Institute of Technology, O-okayama Campus, Tokyo, Japan

Jointly on behalf of both Organizers, it is a great pleasure to welcome you to this specially coordinated event (March 3 - 5, 2010) combining two of the major recurring events in international earthquake-engineering studies: Seventh International Conference on Urban Earthquake Engineering (7th CUEE) and Fifth International Conference on Earthquake Engineering (5th ICEE).

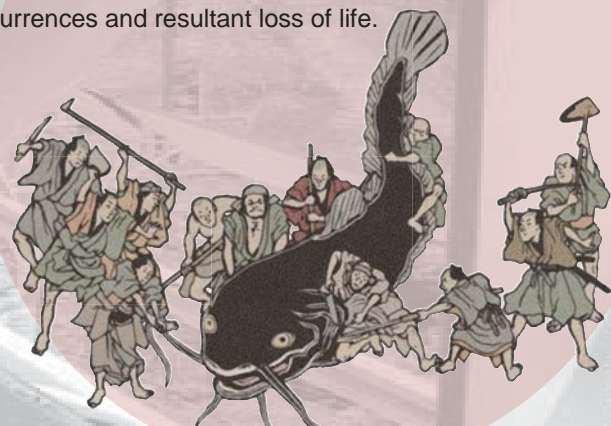
Our 7th CUEE is an integral component of the research activities of the Center for Urban Earthquake Engineering (CUEE), Tokyo Institute of Technology, Japan, as part of the mission of our university's Global Center of Excellence (COE) in the field of earthquake engineering. The 5th ICEE is, on the other hand, a core activity of the Asian-Pacific Network of Centers for Earthquake Engineering Research (ANCER) comprising eleven institutions overseeing Earthquake Engineering studies.

We the organizers of both the 7th CUEE and 5th ICEE are excited by the opportunity to merge the two meetings. In this joint conference, a broad range of research topics are showcased in order to set a new multilateral research platform disseminating state-of-the-art information, illustrating new and emerging mitigation technologies, and promoting new education initiatives. The conference will also reaffirm the commitment of CUEE and ANCER to international collaboration and open exchange of state-of-practice research findings in the aim of improving pre-earthquake preparedness, emergency response, and post-earthquake recovery as well as reinforcing a strong international network for the next generation. We are thus committed to four major investigative themes: 1) Vulnerability of megacities to seismic hazard; 2) Multi-hazard mitigation solutions; 3) Adoption of sensor, actuation, and control technologies within the context of future mitigation strategies; 4) Educational initiatives aimed at cultivating interdisciplinary and cross-cultural earthquake engineering curricula.

This Joint Conference comprises seven state-of-the-art Keynote Talks as well as over 300 additional oral presentations (inclusive of some 80 presentations by young researchers and graduate students during the midday Inter-COE Special Sessions). An exceptional session is also planned on the "12th January 2010 Haiti Earthquake" that has resulted in catastrophic damage with an estimated death toll above 200,000. We wish to express sincere sympathy to those who experienced this tragedy and vow to work toward the future mitigation of such occurrences and resultant loss of life.

### Organized by

Global COE Program "International Urban Earthquake Engineering Center  
for Mitigating Seismic Mega Risk"  
Center for Urban Earthquake Engineering (CUEE), Tokyo Institute of Technology  
E-mail: [office@cuee.titech.ac.jp](mailto:office@cuee.titech.ac.jp)  
URL: <http://www.cuee.titech.ac.jp/>

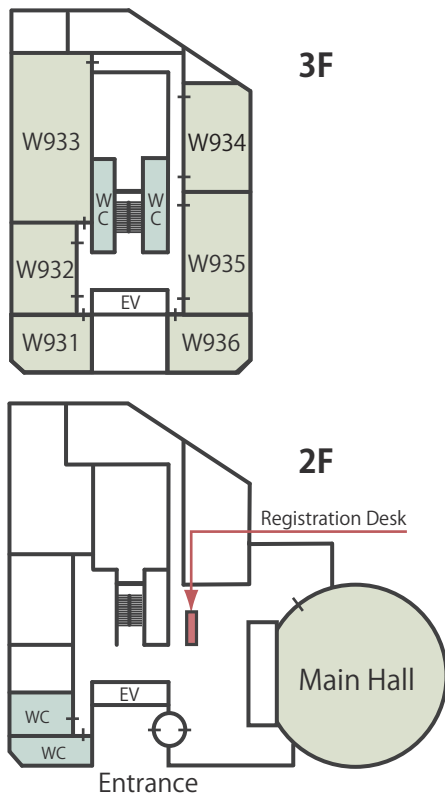


# SESSION SCHEDULE TABLE

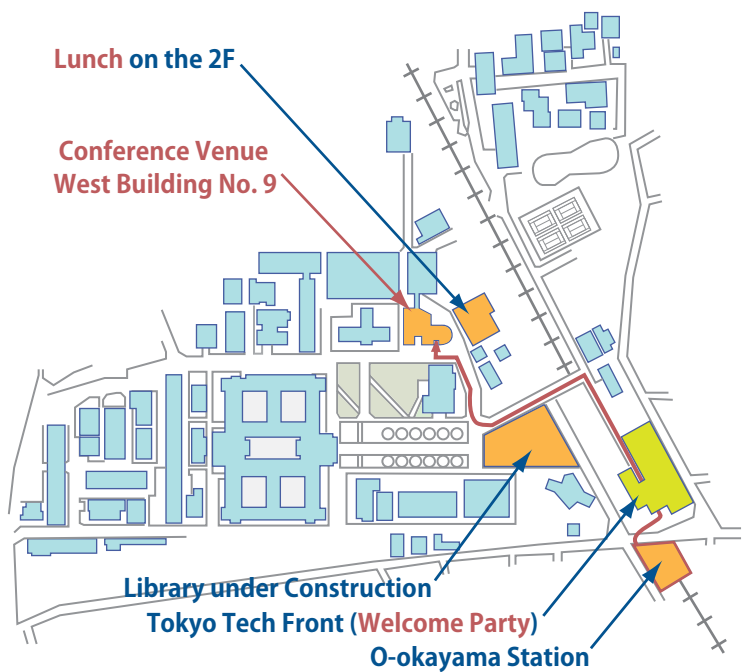
March 3rd							
Main Hall (2F)		W931 (3F)	W932 (3F)	W933 (3F)	W934 (3F)	W935 (3F)	W936 (3F)
9	Registration						
10	Opening Session	Beginning at 10:00 AM					
	K1	Keynote 1	John G. Anderson, Professor, University of Nevada, Reno				
	K2	Keynote 2	Kazuhiko Kasai, Professor, Tokyo Institute of Technology				
11	K3	Keynote 3	Kyriazis Pitilakis, Professor, Aristotle University of Thessaloniki				
12	Lunch						
13	S1-H	S1-1	S1-2	S1-3	S1-4	S1-5	
14	New Design Criteria and Methods 1	Concrete Building 1	Passive Control / Dynamic Test	General and Miscellaneous Issues	Engineering Seismology 1 (Site Response and Strong Motion)	Geotechnical Engineering 1 (Retaining Walls and Lndslides)	
15	S2-H	S2-1	S2-2	S2-3	S2-4	S2-5	
16	New Design Criteria and Methods 2	Concrete Building 2	Non-Structural Components & Contents	Seismic Diagnosis and Strengthening	Engineering Seismology 2 (Microtremor and Seismic Exploration)	Geotechnical Engineering 2 (Soil Dynamic and Tunnels)	
17	K4	Keynote 4	Joseph Penzien, Professor Emeritus, University of California, Berkeley				
18	Welcome Party Tokyo Tech Front						
19							
20							

March 4th						
Main Hall (2F)	W931 (3F)	W932 (3F)	W933 (3F)	W934 (3F)	W935 (3F)	W936 (3F)
9	S3-H	S3-1	S3-2	S3-3	S3-4	S3-5
10	Inter-COE Young Researchers Session (Advanced Technologies)	Inter-COE Young Researchers Session (Structural Engineering-Concrete)	Inter-COE Young Researchers Session (Structural Engineering-Steel)	Inter-COE Young Researchers Session (New Design Criteria & Methods, Earthquake Engineering Practice, and Human Behavior)	Inter-COE Young Researchers Session (Engineering Seismology)	Inter-COE Young Researchers Session (Geotechnical Engineering)
11						Inter-COE Young Researchers Session (Infrastructure Engineering)
12	Lunch					
13	President's Address	Kenichi Iga, President, Tokyo Institute of Technology				
	K5 Keynote 5	Richard Sause, Professor, Lehigh University				
14	S4-H	S4-1	S4-2	S4-3	S4-4	S4-5
15	Rocking Frame	Seismic Evaluation & Retrofit of Concrete Building	Lifeline Systems and Multihazards	Isolation, Seismic Response Control System, and Seismic Response	Engineering Seismology 3 (Long Period Motion)	Geotechnical Engineering 3 (Soil-Structure Interactions)
16	S5-H	S5-1	S5-2	S5-3	S5-4	S5-5
17	E-Defense Blind Analysis Contest Session & Award Ceremony	Timber Structures	Human Behavior	Dynamic Analysis and Failure	Earthquake Loss Estimation	Geotechnical Engineering 4 (Site Response)
18						
19	Banquet Meguro Gajoen					
20						

March 5th							
	Main Hall (2F)	W931 (3F)	W932 (3F)	W933 (3F)	W934 (3F)	W935 (3F)	W936 (3F)
9	S6-H	S6-1	S6-2	S6-3	S6-4	S6-5	S6-6
10	Structures Miscellaneous Issues	Steel Structures (Building) 1	Spatial Structures	Steel Structures and Cable-stayed Bridges	Engineering Seismology 4 (Seismic Hazard and Risk)	Geotechnical Engineering 5 (Liquefaction)	Information and Computing Technology
11	K6 Keynote 6	Akira Wada, President, ANCER / Professor, Tokyo Institute of Technology					
	SL Special	Russell Green, Virginia Tech: An Overview of Geotechnical Field Observations of the January 12, 2010 Haiti Earthquake Eduardo A. Fierro, BFP Engineers, Inc.: Preliminary Reconnaissance Report - 12 January 2010 Haiti Earthquake					
12	Group Photo						
13	Lunch						
14	S7-H	S7-1	S7-2	S7-3	S7-4	S7-5	S7-6
	Earthquake Engineering Practice	Steel Structures (Building) 2	Health Monitoring & Sensing System	Structural Concrete	Socio-Economic Issues	Geotechnical Engineering 6 (Soil-Pile Interactions)	Innovative, Non-conventional Materials & Tech. for Earthquake Relief and Reconstruction
15							
	K7 Keynote 7	Stephen Mahin, Director, PEER / Professor, University of California, Berkeley					
16	Closing Session						
17	Short Field Trip to Tokyo Tech Buildings Retrofitted with Steel Dampers						
18							



West Buidling No. 9



Conference Venue

**Opening Session (Chair : Junichiro Niwa) Main Hall 10:00 ~ 10:30**

**Welcome Message / Kohji Tokimatsu** (Tokyo Institute of Technology)

**Shih-Chi Liu** (US National Science Foundation)

**Opening Remarks / Kazuhiko Kasai** (Tokyo Institute of Technology)

**K1 Keynote Lecture 1 (Chair : Saburoh Midorikawa) Main Hall 10:30 ~ 11:00**

**John G. Anderson**, Professor, University of Nevada, Reno

Engineering Seismology: Directions in Probabilistic Seismic Hazard Analysis

**K2 Keynote Lecture 2 (Chair : Stephen Mahin ) Main Hall 11:00 ~ 11:30**

**Kazuhiko Kasai**, Professor, Tokyo Institute of Technology

Full-Scale Shake Table Tests of 5-Story Steel Building with Various Dampers

**K3 Keynote Lecture 3 (Chair : Kohji Tokimatsu) Main Hall 11:30 ~ 12:00**

**Kyriazis Pitilakis**, Professor, Aristotle University of Thessaloniki

Demand Spectra and SFSI for the Performance Based Design

**Parallel Session 1 13:00 ~ 14:48**

**S1-H New Design Criteria and Methods 1 (Chair : Gregory MacRae & Yu-Chi Sung) Main Hall**

Prescriptive Seismic Codes : Societal Inconveniences / **Fabio Casciati** (University of Pavia)

A Methodology for the Seismic Design of Tall Buildings Incorporating Base Isolation Devices / **Troy A. Morgan**  
(Tokyo Institute of Technology)

Scaling the Ground Motion Records in Order to Estimate the Probabilistic Seismic Demand using Bayesian Statistics / **Mehdi Banazadeh**  
(Amirkabir University of Technology)

Evaluation of the Dynamic Pressure Envelopes in Embedded Storage Tanks under Near Field Earthquakes / **Fayaz R. Rofooei**  
(Sharif University of Technology)

A New Design Idea for Mitigating Seismic Damage of Frame Columns by using SMA Related Device / **Yun Chen** (Tongji University)  
Fiber Reinforced Polymer (FRP) Strengthening of Unreinforced Masonry Bearing Wall Buildings - A New Approach / **Geoff Sharp**  
(Holmes Culley)

**S1-1 Concrete Building 1 (Chair : Chin-Hsiung Loh & Hiroshi Kuramoto) W931**

An Overlooked Failure Mechanism of Reinforced Concrete Beam-Column Joints - An Experimental Verification - / **Hitoshi Shiohara**  
(The University of Tokyo)

Study on Compressive Strength of R/C Column by using the Upper Bound Theorem / **Koshiro Nishimura** (Tokyo Institute of Technology)

Large-Scale Testing of High-Performance Fiber-Reinforced Concrete Coupled Walls / **James K. Wight** (University of Michigan)

Analytical Study of Shear Stud Behavior in High Strength Concrete / **Shim Hak Bo** (Lotte Research & Development Institute)

Strengthening of Masonry Infill Panels with GRP Fabric for Out-of-plane Seismic Loads / **Adam Crewe** (University of Bristol)

**S1-2 Passive Control / Dynamic Test (Chair : Gregory G. Deierlein & Kazuhiko Kasai) Main Hall**

Performance-based Seismic Design of Building Systems with Dampers : Experimental Validation using Real-Time Hybrid Simulation / **James M. Ricles** (Lehigh University)

Experimental Seismic Response of a Full-Scale Seven-Story Mixed-Use Steel/Wood Apartment Building / **Steven E. Pryor**  
(Simpson Strong-Tie)

Cyclic Loading Tests on Buckling-restrained Braces using Round Steel Bar Cores and Double Steel Tubes / **Shunji Fujii**  
(Okabe Corporation)

Parametric Studies of Particle Dampers under Multi-Axis Excitations / **Xilin Lu** (Tongji University)

A Tracking System to Maximize the Efficiency of TMD / **Ali Bozer** (Bogazici University)

Practical Nonlinear Response Analysis Method of Viscoelastic Damper considering Temperature, Frequency, and Strain Dependencies / **Takuya Suzuki** (Takenaka Corporation)

**S1-3 General and Miscellaneous Issues (Chair : Benson Shing & Takumi Shimomura) W933**

Testing of an Earthquake-Damaged Unreinforced Masonry Building / **Dmytro Dizhur** (University of Auckland)

Comparison Shaking Table Test Study on Seismic Strengthening of Single Story Masonry School Building / **Shi Tiehua**  
(China Academy of Building Research)

Life-Cycle Cost Estimation of Open-Type Wharf Based on Seismic Damage Risk / **Hiroshi Yokota** (Hokkaido University)

Shear Carrying Capacity of RC Beams Having Partially Corroded Longitudinal Reinforcement / **Tomohiro Miki** (Kobe University)

Hysteresis Model of Square Reinforced Concrete Columns with Non-seismic Detailing / **Eddie S.S. Lam**  
(The Hong Kong Polytechnic University)

Consideration on Process of Seismic Retrofit using Environmentally Friendly Materials in Existing Bridge / **Won-Rak Jang**  
(Seoul Metro)

**S1-4 Engineering Seismology 1 (Site Response and Strong Motion) (Chair : Atilla Ansal & Hiroyuki Miura) W934**

Site Specific Ground Motion Estimations for the Vulnerability Assessment of Historic Buildings in Istanbul / **Atilla Ansal**  
(Bogazici University)



Site Response at Mexico City. Progress Made and Pending Issues / **Francisco J. Chavez-Garcia** (Universidad Nacional Autónoma de México)

Microzonation and Site Effect Studies in Istanbul / **Oguz Ozel** (Istanbul University)

Site Characteristics of Strong-Motion Earthquake Stations in Metropolitan Izmir, Aegean Region of Turkey / **Orhan Polat** (Dokuz Eylul University)

Attenuation Characteristics of Peak Ground Motions during the  $M_w$ 7.9 Wenchuan Earthquake, China / **Hongjun Si** (Kozo Keikaku Engineering, Inc.)

An Empirical Arias Intensity Relationship for Rock Sites in Stable Continental Regions / **Russell A. Green** (Virginia Tech)

- S1-5 Geotechnical Engineering 1 (Retaining Walls and Landslides) (Chair : Rolando Orense & Jiro Takemura) W935**
- Seismic Earth Pressure Acting on Cantilevered Retaining Walls / **Akihiro Takahashi** (Tokyo Institute of Technology)
- Investigation on the Seismic Performance of Under Ground Efficient Tie-rod System, a New Existing Quay Reinforcement Method by the Centrifuge Experiment / **Takashi Matsuda** (Tokyo Institute of Technology / Obayashi Corp. )
- Evaluation of Damage in Geogrid Reinforced Soil Walls Based on Wall Displacement / **Jun Izawa** (Tokyo Institute of Technology)
- The Study of Relationship between Landslide Geometry and Run-out Distance of Landslide Mass / **Muneyoshi Numada** (The University of Tokyo)
- Mechanism and Sliding Distance of Earthquake-Induced Amayachi Landslide Estimated by Modified Newmark Method / **Atsuo Onoue** (Nagaoka National College of Technology)
- Centrifuge Model Tests and Deformation Analyses on Seismic Behaviors of Embankments in Mountainous Areas / **Susumu Nakajima** (Public Works Research Institute)

## Parallel Session 2 15:10 ~ 16:58

- S2-H New Design Criteria and Methods 2 (Chair : Fabio Casciati & Troy A. Morgan) Main Hall**
- The Development and Use of the Continuous Column Concept / **Gregory MacRae** (University of Canterbury)
- A Novel Approach to Performance-based Seismic Design of Bridge using Fuzzy Genetic Optimization / **Yu-Chi Sung** (National Taipei University of Technology)
- Study on Seismic Retrofitting using Rocking Walls and Steel Dampers / **Hiroshi Ito** (Tokyo Institute of Technology)
- A Study on Earthquake Response Analyses of Buildings using Energy Transmitting Boundary in the Time Domain / **Naohiro Nakamura** (Takenaka Corporation)
- Performance Based Seismic Design for the Shanghai Tower / **Jiemin Ding** (Tongji University)
- S2-1 Concrete Building 2 (Chair : James K. Wight & Hitoshi Shiohara) W931**
- Verification of Pushover Analysis with Chi-Chi Earthquake Damage Database of School Buildings / **Fu-Pei Hsiao** (National Center for Research on Earthquake Engineering)
- Seismic Performance Evaluation of Industrial Building Structures in Turkey using Capacity Spectrum Method / **Baki Ozturk** (Nigde University)
- System Identification and Damage Detection of Degrading Hysteresis of Reinforced Concrete Frames / **Chin-Hsiung Loh** (National Taiwan University)
- Earthquake Response Evaluation using Equivalent SDOF System for Single-Story Asymmetric Buildings / **Hiroshi Kuramoto** (Osaka University)
- Seismic Performance of RC Building by Cyclic Pushover Analysis / **Phaiboon Panyakapo** (Sripatum University)
- S2-2 Non-structural Components & Contents (Chair : Shojiro Motoyui & Jintao Cui) W932**
- Analysis and Experimental Approaches on Seismic Performance of Architectural Curtain Walls / **Baofeng Huang** (Tongji University)
- Dynamic Characteristics of Japanese Style of Ceiling / **Shojiro Motoyui** (Tokyo Institute of Technology)
- Estimation of Floor Acceleration Design Spectra / **Hossein Akhlaghi** (Iranian Earthquake Engineering Association)
- Predicting In-Cabinet Response Spectrum by using Impact Hammer Tests / **Jintao Cui** (Kunsan National University)
- S2-3 Seismic Diagnosis and Strengthening (Chair : Richard Sause & Tomohiro Miki) W933**
- Seismic Retrofitting of RC Columns by CF Rope and its Computational Model / **Takumi Shimomura** (Nagaoka University of Technology)
- Train-Running Safety during Seismicity on Railway Viaduct Group and its Improvement / **Masamichi Sogabe** (Railway Technical Research Institute)
- Shear Retrofitting Method for RC Beams using UFC Panels / **Koji Matsumoto** (Tokyo Institute of Technology)
- Seismic Resistance of Beam-Column Joints in Scaled Framed Bridges / **Kabir Shakya** (Tokyo Institute of Technology)
- Rocking Behavior of Bridge Piers with Spread Footing under Cyclic Loadings and Earthquake Excitations / **H. H. Hung** (National Center for Research on Earthquake Engineering, Taiwan)
- Seismic Assessment for Restoration of Prambanan World Heritage Temples Damaged by the Central Java Earthquake of 2006, Indonesia / **Toshikazu Hanazato** (Mie University)
- S2-4 Engineering Seismology 2 (Microtremor and Seismic Exploration) (Chair : Kuo-Liang Wen & Hitoshi Morikawa) W934**
- Site Effect Study in Taiwan Area From Dense Microtremor Survey / **Kuo-Liang Wen** (National Central University)
- Analysis of Love-Wave Components in Microtremors / **Taku Tada** (National Institute of Advanced Industrial Science and Technology)

A Study on Array Microtremors Survey with Motions Generated by 3D Finite Element Models with Irregular Bedrock / **Huei-Tsy Chen** (National Central University)  
 Evaluation of Site Effects in the Onikobe Basin in Miyagi Prefecture, from Ground Motion Data from Aftershocks of the Iwate-Miyagi Nairiku Earthquake in 2008 and Microtremor Measurements / **Kentaro Motoki** (Tokyo Institute of Technology)  
 Preliminary Analysis for Ground Structure around Damaged Area by 2008 Iwate-Miyagi Nairiku Earthquake / **Hitoshi Morikawa** (Tokyo Institute of Technology)  
 A Detailed Receiver Function Study of the Southern Dead Sea Transform (SDST) / **Ayman Mohsen** (Deutsches GeoForschungsZentrum)

**S2-5 Geotechnical Engineering 2 (Soil Dynamic and Tunnels) (Chair : Joseph Wartman & Akihiro Takahashi) W935**

Difference between Viscous Damping and Hysteresis Damping in Earthquake Response Analysis of Ground / **Nozomu Yoshida** (Tohoku Gakuin University)  
 Seismic Damages of Mountain Tunnels in Japan and Case Studies / **Kazuhide Yashiro** (Tokyo Institute of Technology)  
 Isolation Method for Existing Cut and Cover Tunnel using Polymer Material / **Satoshi Kiryu** (JR East Consultants Company)  
 Initial Shear Modulus of Auckland Residual Soil from Field and Laboratory Tests / **Rolando P. Orense** (The University of Auckland)  
 Liquefaction Potential at Padang City : Comparison of Predicted and Observed Soil Liquefaction during the Padang Earthquake / **Adrin Tohari** (Research Center for Geotechnology)

**K4 Keynote Lecture 4 (Chair : Bill F. Spencer) Main Hall 17:15 ~ 18:00**

**Joseph Penzien**, Professor Emeritus, University of California, Berkeley  
 Early Advances in Earthquake Engineering

**Welcome Party (Chair : Jiro Takemura) Tokyo Tech Front 18:15 ~ 20:00**

**March 4th -Thursday-**

**Parallel Session 3 9:00 ~ 12:00**

**S3-H Inter-COE Young Researchers Session (Advanced Technologies) Main Hall**

**(Chair : Bill F. Spencer & Kazuhiko Kasai)**

Experimental and Theoretical Study on Self-centering Isolators Made of Shape Memory Alloy Metallic Rubber / **Suchao Li** (Harbin Institute of Technology)  
 Passive Energy Dissipation Device using U-shaped Steel Dampers Based on Quasi-Linear Motion Mechanism / **Jinhe Gao** (Nagoya University)  
 Adaptive Noise Variance Identification for Data Fusion using Subspace-based Technique / **Zhen Li** (HKUST, Hong Kong)  
 Effective Buckling Length for Buckling Restrained Braces Considering Rotational Stiffness at Restrainer Ends / **Ryota Matsui** (Tokyo Institute of Technology)  
 An Experimental Study on ASNLSE Method for Health Monitoring of Base-Isolated Structures / **Qiang Yin** (Nanjing University)  
 Effect of Rubber Bearing's Modeling on Seismic Response of Base Isolated Highway Bridge / **Muhd K. Razzaq** (Saitama University)  
**(Chair : Fabio Casciati & Akira Wada)**  
 A Study on the Stability of Step-over Isolated Structure / **Yosuke Yamamoto** (Tokyo Institute of Technology)  
 Optimum Design of Particle Dampers under Random Excitation / **Zheng Lu** (Tongji University)  
 Measurement of Performance and Estimation of Scalability for Enhanced IES with High Performance Computing Techniques / **Gholamreza Sobhaninejad** (The University of Tokyo)  
 A New Model Parameter Identification Technique for Magnetorheological Dampers / **Aditya Venkatesan** (National Institute of Technology-Allahabad)  
 Torsional Seismic Response Reduction by Passive Control Device for Conventional Post-and-beam One-story Wooden House with Stiffness Eccentricity / **Yoshihiro Yamazaki** (Tokyo Institute of Technology)

**S3-1 Inter-COE Young Researchers Session (Structural Engineering-Concrete) W931**

**(Chair : John Wallace & Junichiro Niwa)**

Modeling of Diagonally Reinforced Concrete Coupling Beams / **David Naish** (University of California, Los Angeles)  
 The Effect of Angle's Crack on The Debonding of The Reinforced Beams by Polymer's Fiber of The FRP (Experimental and Modeling) / **Hassan Afshin** (Sahand University in Tabriz)  
 Effect on the Nonlinear Performance of Tall Buildings under the Earthquake Due to the Simplification to Structural Systems for the Earthquake Risk Analysis / **Du Wenxue** (China Earthquake Administration)  
 An Evaluation of Vibration Comport on Reaction Mass Foundation with Shake Table System / **DaJung Jung** (Pusan National University)  
 Analytical and Experimental Study on RC Exterior Beam-Column Joints without Transverse Reinforcement / **Sangjoon Park** (University of California, Berkeley)  
 Damage Distribution of Buildings in Istanbul During the 1894 Marmara Sea, Turkey, Earthquake / **Masashi Morita** (Tokyo Institute of Technology)

**(Chair : John Stanton & Hiroyasu Sakata)**

The Analysis of Non-linear Seismic Response between a Collapsed and a Serious Damage Infilled Frame Structure in Yingxiu Town - The Heavy Disaster Areas of Wenchuan 8.0 Earthquake / **Yan Peilei** (Harbin Engineering University)  
Strengthening Reinforced Concrete Columns by High Performance Ferrocement / **Ivy F.Y. Ho** (The Hong Kong Polytechnic University)  
Seismic Analysis of RC Frame Structure with Passive Energy Dissipation Devices using Modal Pushover Analysis / **Gao Ma** (Harbin Institute of Technology)  
Experimental Study of Unreinforced Masonry Pier Sub-Structures / **Charlotte Knox** (The University of Auckland)  
Strength Deterioration Model Based on Effective Hysteretic Energy Dissipation for RC Members under Cyclic Loading / **Zhe Qu** (Tsinghua University)  
Simulation-Based Fragility Relationships for Unreinforced Masonry Buildings / **Thomas Frankie** (University of Illinois)

**S3-2 Inter-COE Young Researchers Session (Structural Engineering-Steel) W932**

**(Chair : Gregory G. Deierlein & Toru Takeuchi)**

Assessment of the Seismic Performance of a Suspended Zipper Frame with Hybrid Testing / **Andreas Stavridis** (University of California, San Diego)  
Effects of Edge Distances on Shear Capacity of Anchor Bolt Fastening Steel Column Base to Concrete Foundation / **Hayato Asada** (Tokyo Institute of Technology)  
Seismic Performance Evaluation of the Steel Intermediate Moment Frame Systems with RBS with Bolted Web / **Seong-Hoon Hwang** (Construction Research Center at Hanyang University)  
Evaluation of Plastic Energy Dissipation Capacity of Steel Beams under Various Loading Histories / **Yu Jiao** (Tokyo Institute of Technology)  
The Influence of the Lateral Load Pattern on the Minimum Column-to-Beam Moment Strength / **Se Woon Choi** (Yonsei University)  
System-level Seismic Evaluation of Partial-strength Semi-rigid Steel Frames using Hybrid Simulation / **Hussam Mahmoud** (University of Illinois)

**(Chair : Stephen Mahin & Satoshi Yamada)**

Numerical Simulation of Large Scale Seismic Frame Structures / **Yi-Jer Yu** (National Center for Research on Earthquake Engineering)  
Evaluation of Rotation Capacity for Reduced Beam Section with Bolted web / **Ki-Hoon Moon** (Han Yang university)  
Applicability of Simulated Ground Motions in Design of Tall Buildings in California / **Pierson Jones** (University of California, Irvine)  
Seismic Behavior of a New Steel Beam-column Connection using Steel Fiber Reinforced Cementitious Composite (SFRCC) / **Yao Cui** (Kyoto University)  
Test on Retrofit Effects of Steel Beam-to-Column Connections with RC Floor Slabs / **Yulin Chung** (Kyoto University)

**S3-3 Inter-COE Young Researchers Session (New Design Criteria & Methods, Earthquake Engineering Practice, and Human Behavior) W933**  
**(Chair : Xilin Lu & Tatsuo Ohmachi)**

A Design Approach using Viscous-type Damper to Control Seismic Vibration of Slip-hysteretic Structure / **Wuchuan Pu** (Tokyo Institute of Technology)  
Structural Damage Assessment Based on 3D Nonlinear Dynamic Response and Its Seismic Design / **Yongle Zhang** (Zhejiang University)  
Seismic Response of Rocking Bridges Self-Centering Due to Gravity / **Mostafa Masoudi** (IUSS Pavia)  
Analysis and Comparison of An Innovative Partial Isolation Method and Traditional Isolation Method for A Shaking Table Laboratory / **Yifei Ma** (Tongji University)  
Static-Dynamic Analysis Method for Energy-Dissipated Design of Frame-Shear-Wall Structures with Dampers / **Gengwen Zhao** (Southeast University)  
Response of RC Buildings under Multiple Earthquakes / **Adel Essam Abdelnaby** (University of Illinois at Urbana-Champaign)  
Experimental Study on In-plane and Out-of-plane Behavior of PP-Band Retrofitted Masonry Wattle Made of Shapeless Stones / **Kotaro Sakurai** (The University of Tokyo)

**(Chair : Jerome Hajjar & Ryuzo Ohno)**

Educational Activities To Promote Earthquake Preparedness using A Portable Virtual Reality System / **Shinsuke Tsubota** (Tokyo Institute of Technology)  
Residents' Evaluation in Java 2006 Earthquake Post Disaster Settlement -Case Study of New Ngelepen, Sleman, Yogyakarta- / **Syam Rachma Marcillia** (Tokyo Institute of Technology)  
Survey on Causes of Fatalities in Recent Japanese Earthquakes / **Masahiro Yoshimura** (Tokyo Institute of Technology)  
Workshop for Disaster Imagination Improvement of Nursery School Leaders / **Mariko Abe** (The University of Tokyo)

**S3-4 Inter-COE Young Researchers Session (Engineering Seismology) W934**

**(Chair : John Anderson & Saburoh Midorikawa)**

Detailed Mapping of Geomorphologic Classification using High Resolution Satellite Image and Digital Elevation Model for Seismic Hazard Assessment / **Kazunori Ishii** (Tokyo Institute of Technology)  
Analysis of the BICEP Borehole Array / **Liam Wotherspoon** (The University of Auckland)  
Three-Dimensional Site Response at KiK-net Downhole Arrays / **Eric M Thompson** (Tufts University)  
Ground Motion Selection and Scaling for Site Response Analysis / **Gokce Tonuk** (Bogazici University)  
Imaging Sedimentary Layers of Metro Manila, Philippines from the Joint Inversion of Receiver Function and Surface-Wave Phase Velocity / **Rommel Grutas** (Tokyo Institute of Technology)

Site Characterization using Spatial Autocorrelation Method in Linear and Triangular Arrays by Means of Ambient Vibration Measurements / **Fabio Upegui-Botero** (University of Puerto Rico at Mayagüez)

**(Chair : Kuo-Liang Wen & Hiroaki Yamanaka)**

Time-frequency Energy Distribution of Wenchuan Earthquake Motions Based on Matching Pursuit Decomposition / **Dongwang Tao** (Harbin Institute of Technology)

A Quantitative Approach to Estimate Coseismic Displacements in the Near-Field from Strong-Motion Accelerographs: Example of the 2007 Niigata-Ken Chuetsu-Oki Earthquake, Japan / **Emmanuel H. Javelaud** (Tokyo Institute of Technology)

Development of a Forward-Inversion Crust Modeling Scheme for Accurate Strong-Ground Motion Prediction / **Pher Errol B. Quinay** (Tokyo Institute of Technology)

Effects of Water Depth Variation on Seismogram Synthesis in Oceanic Structures Based on a Hybrid Boundary Element Method / **Zheng-Hua Qian** (Tokyo Institute of Technology)

Development of Earthquake Experience System using Ground Motion Simulator "JISHIN the VUTON" / **Sou Adachi** (Hakusan Corporation)

**S3-5 Inter-COE Young Researchers Session (Geotechnical Engineering) W935**

**(Chair : Ross W. Boulanger & Kohji Tokimatsu)**

Characterization of ERT as A New Non-invasive Monitoring Method of Liquefaction Process / **Suresh R Dash** (University of Oxford)

Large Deformation Analysis of Dynamic Behavior of Embankment on Liquefiable Sand Deposit using a Strain Space Multiple Mechanism Model / **Kyohei Ueda** (Kyoto University)

Additional Anchor Influence on Dynamic Behavior of Anchored Retaining Wall / **Ali Derakhshani** (The University of Tokyo)

Effect of Stress State around Tunnel on Pseudo-static Response of Urban Mountain Tunnel in Sand / **Shuhei Shibayama** (Tokyo Institute of Technology)

Dynamic Field Testing of Shallow Foundations Subjected to Rocking / **Thomas B Algie** (The University of Auckland)

Mechanical Behavior of Piled Raft Foundation in Sand Subjected to Static Horizontal Load / **Kouhei Sawada** (Tokyo Institute of Technology)

**(Chair : Ahmed Elgamal & Jiro Takemura)**

Simplified Dynamic Analysis of Pile Supported Structures in Liquefiable Soils / **Domenico Lombardi** (University of Bristol)

Lateral Resistance Reduction for Static Analysis of Lateral Spreading / **Christopher R McGann** (University of Washington)

Vertical Loads Effect on Lateral Pile Group Response on the Basis of Soil-pile-cap Interactions / **Mahmoud Nasser Hussien** (Kyoto University)

**S3-6 Inter-COE Young Researchers Session (Infrastructure Engineering) W936**

**(Chair : David T. Lau & Kazuhiko Kawashima)**

Ground-motion Selection for PEER Transportation Research Program / **Nirmal Jayaram** (Stanford University)

Damage Analysis of High Arch Dam including Contraction Joint and Cracking Nonlinearity / **Xiaowen Yao** (Zhejiang University)

Nonlinear Behavior of Reinforced Concrete Columns Impacted by a Tsunami Water-borne Shipping Container /

**Kavinda M. Madurapperuma** (Tokyo Institute of Technology)

Comparison of Seismic Response of Skewed Bridges to Near Vs. Far Field Motions / **Peyman Kaviani** (University of California, Irvine)

Effect of Fiber Reinforced Cement Composites on the Seismic Performance of Bridge Columns / **Richelle Zafra** (Tokyo Institute of Technology)

Effect of Finger Expansion Joints on Seismic Response of Bridges / **Guilian Quan** (Tokyo Institute of Technology)

**(Chair : Lucia Faravelli & Kiyoshi Ono)**

Three Dimensional Nonlinear Finite Element Analysis of Seismic Pounding between Multi-Story Reinforced Concrete Buildings / **Deepak Raj Pant** (Tokyo Institute of Technology)

Experimental Testing of Innovative Confinement Techniques for Seismic Retrofitting of RC Bridge Columns / **Bassem Andrawes** (University of Illinois)

Experimental Study on Static and Dynamic Behavior of PP-band Mesh Retrofitted Adobe Masonry Structures /

**Navaratnarajah Sathiparan** (The University of Tokyo)

Seismic Performance and Communication Failure of Cellphone Towers in Iran's Seismic Zones, Case Study : Developing Structural and Communicational Fragility Curves for 24m Monopole Tower / **Mehdi Sadeghi** (Azad University of Tehran)

Mitigation of Residual Deformations of RC Bridge Piers using Steel Fiber Composite Bars as Longitudinal Reinforcement / **Mohamed F.M. Fahmy** (Ibaraki University)

Bayesian Network for Infrastructure Seismic Risk Assessment: Challenges and Opportunities / **Michelle T. Bensi** (University of California, Berkeley)

**President's Address of Welcome (Chair : Kohji Tokimatsu) Main Hall 13:00 ~ 13:10**

**Kenichi Iga**, President, Tokyo Institute of Technology

**K5 Keynote Lecture 5 (Chair : Chitoshi Miki) Main Hall 13:10 ~ 13:40**

**Richard Sause**, Professor, Lehigh University

Self-Centering Damage-Free Seismic-Resistant Steel Frame Systems



**Parallel Session 4 13:55 ~ 15:43**

- S4-H Rocking Frame (Chair : James M. Ricles & Toru Takeuchi) W932**  
Seismic Resilience of Self-Centering Steel Braced Frames with Replaceable Energy-Dissipating Fuses - Part 1 : Large-Scale Cyclic Testing / **Jerome F. Hajjar** (University of Illinois)  
Seismic Resilience of Self-Centering Steel Braced Frames with Replaceable Energy-Dissipating Fuses - Part 2: E-Defense Shake Table Test / **Gregory G. Deierlein** (Stanford University)  
Seismic Behavior of Steel Rocking Frames by Three-dimensional Shaking Table Tests / **Mitsumasa Midorikawa** (Hokkaido University)  
Shaking Table Test on Controlled Rocking Frame of Wooden Structures / **Shoichi Kishiki** (Tokyo Institute of Technology)
- S4-1 Seismic Evaluation & Retrofit of Concrete Building (Chair : Cheng Shaoge & Susumu Kono) W931**  
Seismic Retrofit of RC or SRC Buildings with Prestressed Braces / **Susumu Kono** (Kyoto University)  
Seismic Evaluation and Retrofit of RC Buildings by using Structural Walls / **Yeou-Fong Li** (National Taipei University of Technology)  
Structural Retrofit for Depth Reduced Beams in Mid-rise Existing Reinforced Concrete Boxed Wall-buildings / **Yo Hibino** (Tokyo Institute of Technology)  
A Brief Introduction to the New Standard for Seismic Appraisal of Existing Buildings in China / **Cheng Shaoge** (China Academy of Building Research)  
Seismic Evaluation of Existing Facilities of Primary and Secondary Schools in Shanghai, China / **Haibei Xiong** (Tongji University)  
Structural Retrofit of the Taipei Camphor Factory / **Chao-Hsun Huang** (National Taipei University of Technology)
- S4-2 Lifeline Systems and Multihazards (Chair : David T. Lau & Nobuoto Nojima) W932**  
Earthquake Damage Assessment of Multiple Lifelines for System Interaction Analysis / **Nobuoto Nojima** (Gifu University)  
Earthquake Disaster Restoration Support Technologies for Electric Power Distribution Equipment / **Yoshiharu Shumuta** (Central Research Institute of Electric Power Industry)  
Modeling of Restoration Process associated with Critical Infrastructures and the Interdependency due to a Seismic Disaster / **Gaku Shoji** (University of Tsukuba)  
Application of Disaster Chain Principle in the Earthquake Disaster Mitigation / **Yu Shizhou** (China Earthquake Administration)
- S4-3 Isolation, Seismic Response Control System and Seismic Response (Chair : Xilin Lu & Jerome P. Lynch) W933**  
Three-dimensional Analysis for Square Seismic Isolation Bearings under Large Shear Deformation and High Axial Loads / **Masaru Kikuchi** (Hokkaido University)  
Structural Response Control by Controllable Dampers setting at Inter-Story of Buildings / **Hideto Kanno** (Akita Prefectural University)  
Experimental Study of Rate-Dependent Mechanical Behavior of Laminated Rubber Bearings / **Takashi Imai** (Rubber Bearing Association)  
Viscous Fluid Devices for an Italian Viaduct / **Lucia Faravelli** (University of Pavia)  
Nonlinear Modeling and Seismic Performance of a Multi-Span Simply Supported Viaduct / **Ashok K. Jain** (Indian Institute of Technology, Roorkee)  
Shake Table Test and Non-Linear Dynamic Analysis for a Bridge Model using Rigid-Plastic Dampers / **Takao Okada** (Public Works Research Institute)
- S4-4 Engineering Seismology 3 (Long Period Motion) (Chair : Tomotaka Iwata & Hiroaki Yamanaka) W934**  
Long-Period Ground Motion Simulation of Osaka Sedimentary Basin for a Hypothetical Nankai Subduction Earthquake / **Tomotaka Iwata** (Kyoto University)  
Effects of Shallow Soil Layers on Propagation of Long-Period Ground Motion in Large Basin in 3D Numerical Simulation / **Hiroaki Yamanaka** (Tokyo Institute of Technology)  
Broadband Strong-Motion Evaluation by a Hybrid Method for The Miyagi-Oki Earthquakes, Japan / **Susumu Ohno** (Tohoku University)  
3D Subsurface Structural Model for Strong Motion Simulation around Lake Biwa using Earthquake Ground Motion Records / **Haruhiko Suzuki** (OYO Corporation)  
An Evaluation of Long-Period Earthquake Motion for the Purpose of Structural Design / **Izuru Okawa** (Building Research Institute of Japan)  
Shaking Table Test for Indoor Human Response and Evacuation Limit / **Toru Takahashi** (Chiba University)  
Disaster Mitigation Activities of a High-Rise Building in the Shinjuku Station Area by Collaborating with Local Government and Communities / **Yoshiaki Hisada** (Kogakuin University)
- S4-5 Geotechnical Engineering 3 (Soil-Structure Interactions) (Chair : Takaji Kokusho & Subhamoy Bhattacharya) W935**  
Performance-based Earthquake Evaluation of a Single Column Bridge System / **Jinchi Lu** (University of California, San Diego)  
Effects of Roughness of Shallow Foundations Surface on Superstructure response during a Strong Earthquake / **Shuji Tamura** (Kyoto University)  
Centrifugal Modeling of Road Embankment Engulfed by Tsunami for its Damage Prediction / **Akihiko Hiro-oka** (Kyushu Institute of Technology)  
Boundary Effects of Laminar Container in Centrifuge Shaking Table Test / **Chung-Jung Lee** (National Central University)  
Distinct Element Analysis on Uplift Resistance of Belled Pile and Multi-belled Piles / **Tsuyoshi Honda** (Takenaka Corporation)
- S4-6 Tsunami 1 (Chair : Tatsuo Ohmachi & Anil C. Wijeyewickrema) W936**  
Introduction of Japanese Coastal Wave Monitoring Network / **Toshihiko Nagai** (Port and Airport Research Institute, Japan)  
Field Survey of the 2009 Samoa Earthquake Tsunami / **Shunichi Koshimura** (Tohoku University)

Differences of Tsunami Waves induced by Earthquakes, Submarine Landslides and Sea Floor Collapse / **Kam-tim Chau**  
(The Hong Kong Polytechnic University)  
Verification of a Dynamic Tsunami Simulation Technique Based on Observation Records in Near-field / **Shusaku Inoue**  
(Tokyo Institute of Technology)  
Recent Progress on Offshore Tsunami Observation / **Hiroyuki Matsumoto** (JAMSTEC)

#### **Parallel Session 5 16:05 ~ 17:53**

- S5-H E-Defense Blind Analysis Contest Session & Award Ceremony (Chair : Kazuhiko Kasai & Tsuyoshi Hikino) Main Hall**  
Overview of 2009 E-Defense Blind Analysis Contest Results / **Tsuyoshi Hikino** (National Research Institute for Earth Science and Disaster Prevention)  
2-D Blind Analyses of Full-Scale 5-Story Building with Steel Dampers / **Harumi Yoneda** (Takenaka Research and Development Institute)  
3-D Blind Analyses of Full-Scale 5-Story Building with Steel Dampers / **Naohiro Nakamura** (Takenaka Corporation)  
2-D and 3-D Blind Analyses of Full-Scale 5-Story Building with Viscous Dampers / **Tadamichi Yamashita**  
(Kozo Keikaku Engineering, Inc.)  
Award Presentation by **Masayoshi Nakashima** (E-Defense / Kyoto University)
- S5-1 Timber Structures (Chair : John W. van de Lindt & Hiroshi Isoda) W931**  
Testing of a Full-Scale Apartment Building at E-Defense: Design and Performance / **John W. van de Lindt** (Colorado State University)  
Analytical Study on Seismic Response Controlled Effect of Wooden Houses using Frame Model / **Kazuhiro Matsuda**  
(Tokyo Institute of Technology)  
Indian Bamboo as An Alternate to Timber : A Critical Evaluation from Strength of Material Perspective / **Parthasarathi Mukhopadhyay**  
(Bengal Engineering and Science University)  
Experimental Study on Shear Behavior of Thick Structural Plywood Sheet Floor Framing with Opening / **Hiroyasu Sakata**  
(Tokyo Institute of Technology)  
Recent Large-scale Wood Construction in Japan - Development and Consideration of Mid-rise Timber Based Structure - / **Hiroshi Isoda**  
(Shinshu University)
- S5-2 Human Behavior (Chair : Ika Putra & Ryuzo Ohno) W932**  
Emergency and Transitional Shelter Post Earthquake: The Role of Social Capital in Javanese Community / **Ika Putra**  
(Gadjah Mada University)  
Housing Reconstruction and Community / **Yoshimitsu Shiozaki** (Kobe University)  
Human Behavior in Preparation for Earthquake Damage Mitigation / **Haruyuki Fujii** (Tokyo Institute of Technology)  
Spatiotemporal Distribution of Railroad Users Facing Difficulty in Returning Home After A Devastating Earthquake / **Toshihiro Osaragi**  
(Tokyo Institute of Technology)  
A Human Behavior Model in Replacement of Wooden Housing for Earthquake Damage Mitigation / **Yusuke Meshitsuka**  
(Tokyo Institute of Technology)
- S5-3 Dynamic Analysis and Failure (Chair : Nemy Banthia & Junichiro Niwa) W933**  
Shake-Table Tests and Numerical Study of the Seismic Performance of Non-Ductile RC Frames with Masonry Infill Walls / **Benson Shing**  
(University of California, San Diego)  
Shake Table Experiment of Reinforced Concrete Bridge Columns using E-Defense / **Kazuhiko Kawashima** (Tokyo Institute of Technology)  
Seismic Progressive Collapse of Reinforced Concrete Frames and Bridges / **David T. Lau** (Carleton University)  
Cracking Behavior of Reinforced Concrete Beams Repaired with Strain Hardening Cement-based Composites / **Yuichi Uchida**  
(Gifu University)
- S5-4 Earthquake Loss Estimation (Chair : Hideki Kaji & Carlos Zavala) W934**  
Rapid Visual Seismic Vulnerability Assessment Tool and its application in disaster risk mitigation in urban areas / **Youb Raj Paudyal**  
(Ehime University)  
Damage Estimation of Water Distribution Pipes following Recent Earthquakes in Japan / **Yoshihisa Maruyama** (Chiba University)  
Post Quake Microzoning Study on Pisco and Tambo de Mora due to August 15th 2007 Pisco Quake / **Carlos Zavala** (Universidad Nacional de Ingeniería, Lima, Peru)  
Enhancement of Earthquake and Tsunami Disaster Mitigation Technology In Peru: A SATREPS Project / **Fumio Yamazaki**  
(Chiba University)  
Seismic Loss Estimation for Three Major Cities in Bangladesh / **Pennung Warnitchai** (Asian Institute of Technology)
- S5-5 Geotechnical Engineering 4 (Site Response) (Chair : Kyriazis Pitilakis & Jun Izawa) W935**  
Site Amplification Formula from Bedrock to Surface using Average vs in Equivalent Surface Layer Based on Vertical Array Records / **Takaji Kokusho** (Chuo-University)  
Where Topographic Effects Responsible for Building Collapses in the 2001 Southern Peru Earthquake? / **Joseph Wartman**  
(Drexel University)  
H/V Method Used to Qualify the Modification of Dynamic Soil Characteristics due to Ground Improvement Work by Means of Heavy Compaction Process A Case Study: the Former Givors's Glass Factory / **Stephane Brule** (Menard Group)  
Simulation of Strong Ground Motions at K-NET Kashiwazaki during the 2007 Niigata-ken Chuetsu-oki Earthquake / **Kohji Tokimatsu**  
(Tokyo Institute of Technology)

- S5-6 Tsunami 2 (Chair : Tatsuo Ohmachi & Anil C. Wijeyewickrema) W936**  
 Numerical Simulation of Tsunami Generation / **Taro Kakinuma** (Kagoshima University)  
 Numerical Simulation of Hydroacoustic Effects in Tsunami Source / **Sergey Kolesov** (Moscow State University)  
 Hydrodynamics of Boulder Transport on a Shore Platform on Phi Phi Island during the 2004 Tsunami / **Bao J.Q.** (The Hong Kong Polytechnic University)  
 Real-Time Tsunami Simulation Accelerated by GPU / **Marlon Arce Acuna** (Tokyo Institute of Technology)  
**Banquet (Chair : Kazuhiko Kawashima) Meguro Gajoen 19:00 ~ 21:00**

## March 5th -Friday-

### Parallel Session 6 9:00 ~ 10:48

- S6-H Structures Miscellaneous Issues (Chair : Sekhar Chandra Dutta & Kimiro Meguro) Main Hall**  
 Diagnosis, Analysis and Retrofitting of an Old Masonry Building in Algeria / **Fabio Casciati** (University of Pavia)  
 A Comparative Experimental Study on Alternative Strengthening Methods for Historical Masonry Walls / **Fatih Sutcu** (Istanbul Technical University)  
 Educational Programs at the PEER Center That Encourage Multidisciplinary Understanding / **Heidi Faison** (University of California Berkeley)  
 Improving Seismic Performance of Brick Masonry Junctions / **Sekhar Chandra Dutta** (Indian Institute of Technology)  
 Towards Earthquake Safer Non-engineering Houses by Technological and Social Approaches / **Kimiro Meguro** (The University of Tokyo)  
 The Investigation and Analysis of Structure Earthquake Damage in Dujiangyan / **Zhong Jiangrong** (China Earthquake Administration)
- S6-1 Steel Structures (Building) 1 (Chair : Hsieh-Lung Hsu & Kikuo Ikarashi) W931**  
 Full Scale Shaking Table Collapse Experiment on 4-Story Steel Moment Frame: Part 1 Outline of the Experiment / **Satoshi Yamada** (Tokyo Institute of Technology)  
 Full Scale Shaking Table Collapse Experiment on 4-Story Steel Moment Frame: Part 2 Detail of Collapse Behavior / **Keiichiro Suita** (Kyoto University)  
 Numerical Simulation of Collapse using Collaborative Structural Analysis System / **Motohide Tada** (Osaka University)  
 Parallel FE-Analysis for Collapse Simulation of 4-Story Steel Building Frame / **Tomoshi Miyamura** (Nihon University)  
 A Steel Database for Component Deterioration of Tubular Hollow Square Steel Columns under Varying Axial Load for Collapse Assessment of Steel Structures under Earthquakes / **Dimitrios G. Lignos** (Kyoto University)  
 Collapse Mechanism for Steel Moment Resisting Frames with Different Column Bases / **Katsunori Kaneda** (Structural Design PLUS ONE Co., Ltd)
- S6-2 Spatial Structures (Chair : Toshiyuki Ogawa & Zhang Hui) W932**  
 Seismic Risk Evaluation of School Gymnasiums based on Dynamic Nonlinear Response Analysis / **Shoji Nakazawa** (Toyoashi University of Technology)  
 Response Control of Lattice Dome Roofs using Seismic Isolation / **Toru Takeuchi** (Tokyo Institute of Technology)  
 Shaking Table Tests of Cylindrical Lattice Shell Roofs supported by Substructure with Viscous Damper subjected to Horizontal Earthquake Motions / **Tomohiko Kumagai** (Tokyo Institute of Technology)  
 Structural Design and Research of A Large-span Single-layer Ellipsoid Latticed Shell with Complex Boundary / **Zhang Hui** (Shanghai IADR)
- S6-3 Steel Structures and Cable-stayed Bridges (Chair : Moriaki Suzuki & Kiyoshi Ono) W933**  
 Fatigue Behavior of Load-Carrying Cruciform Joints with Weld Defect under Cyclic Plastic Strain / **Takeshi Hanji** (Tokyo Institute of Technology)  
 Effect of Plate Thickness on Low Cycle Fatigue Strength of Cruciform Welded Joints / **Koji Kinoshita** (Gifu University)  
 Residual Strength of Damaged Steel Bridge Pier with Cylindrical Cross Section and its Repair Method / **Moriaki Suzuki** (Aichi Institute of Technology)  
 Elasto-Plastic Behavior of Spiral Steel Pipes under Cyclic Loading / **Kiyoshi Ono** (Tokyo Institute of Technology)  
 The Application to the Viaduct of the Energy Dissipation Connectors of Girders in Consideration of Axial and Transverse Directions / **Kentaro Tanaka** (Kanto Gakuin University)  
 Seismic Fragility Analysis of Long-span Cable-stayed Bridges / **Jiao Chi-yu** (Beijing University of Civil Engineering and Architecture)  
 Identifying Cable Tension Loss and Deck Damage in a Cable-Stayed Bridge using a Moving Vehicle / **Shih-Hsun Yin** (National Taipei University of Technology)
- S6-4 Engineering Seismology 4 (Seismic hazard and risk) (Chair : Jean-Pierre Bardet & Saburoh Midorikawa) W934**  
 Seismic Hazards of Gyeongju Historic Areas / **Heon Joon Park** (KAIST)  
 Signal Processing and Probabilistic Seismic Hazard Analysis Tools for Characterizing the Impact of Near-Fault Directivity / **Jack W. Baker** (Stanford University)  
 The Gutenberg-Richter b-Value of The Korean Peninsula for a Seismic Hazard Analysis / **Jeong-Moon Seo** (Korea Atomic Energy Research Institute)

Upthrow of Objects during Recent Earthquakes in Japan / **Saburoh Midorikawa** (Tokyo Institute of Technology)  
 Seismic Demands on California High Speed Rail / **Tat S. Fu** (University of Southern California)  
 Distribution of Building Damage Areas Detected from Satellite Optical Images of the 2006 Central Java, Indonesia, Earthquake /  
**Hiroyuki Miura** (Tokyo Institute of Technology)  
 Building Damage Estimation using Seismic Intensity and Satellite L-band SAR Imagery / **Masashi Matsuoka** (National Institute of  
 Advanced Industrial Science and Technology)

**S6-5 Geotechnical Engineering 5 (Liquefaction) (Chair : Ahmed Elgamel & Hiroko Suzuki) W935**  
 Non-linear Dynamic Modeling of Bridge Embankments Underlain by Liquefied Soil / **Ross W. Boulanger** (University of California, Davis)  
 Seismic Stability of Gravity Type Quay Wall on Desaturated Loose Sand / **Jiro Takemura** (Tokyo Institute of Technology)  
 Centrifuge Model Tests on Effect of Deep Mixing Wall Spacing on Liquefaction Mitigation / **Masaki Kitazume** (Tokyo Institute of  
 Technology / Port and Airport Research Institute)  
 In-situ Air Injection as Liquefaction Countermeasure and its Evaluation by Multiphase Flow Simulation / **Mitsu Okamura**  
 (Ehime University)  
 Effects of Calcite Precipitation on Liquefaction Resistance of Sand / **Kazuyuki Hayashi** (Ehime University)

**S6-6 Information and Computing Technology (Chair : Tara Hutchinson & Takahiro Ohtsuka) W936**  
 Urban Structural Damage Characterization using Optical Imagery / **Tara Hutchinson** (University of California, San Diego)  
 Prediction and Utilization of Spatial Geotechnical Information for Administrative Decision Support on Earthquake Disaster in  
 Urban Area / **Chang-Guk Sun** (Korea Institute of Geoscience and Mineral Resources)  
 A New Disaster Management Manual for Disaster Reduction / **Shinya Kondo** (The University of Tokyo)  
 Parallelized Fast Multiple BEM for Seismic Analysis in Time-Domain / **Sohichi Hirose** (Tokyo Institute of Technology)  
 Analytical Evaluation for Local Buckling Behavior of Steel Framed Structures / **Takahiro Ohtsuka** (Meijo University)

**K6 Keynote Lecture 6 (Chair : Shih-Chi Liu) Main Hall 11:00 ~ 11:30**  
**Akira Wada**, President, ANCER / Professor, Tokyo Institute of Technology  
 Seismic Design for Resilient Society

**SL Special Lecture (Chair : Kazuhiko Kawashima ) Main Hall 11:30 ~ 12:20**  
**Russell Green**, Virginia Tech  
 An Overview of Geotechnical Field Observations of the January 12, 2010 Haiti Earthquake  
**Eduardo A. Fierro**, BFP Engineers, Inc.  
 Preliminary Reconnaissance Report - 12 January 2010 Haiti Earthquake

**Group Photo 12:20 ~ 12:30**

**Parallel Session 7 13:30 ~ 15:18**

**S7-H Earthquake Engineering Practice (Chair : Yongfeng Du & Abbas Moustafa) Main Hall**  
 Selection of Earthquake Records for Time-history Analysis of Structures / **Abbas Moustafa** (Kyoto University)  
 Instrumental Earthquake Intensities vs. Ductility Demand: Correlation Study using Data from Europe & The Middle East /  
**Juan Enrique Martinez-Rueda** (University of Brighton)  
 Bi-spectra for Two-way Asymmetric-plan Structures under Bi-directional Ground Excitations / **Jui-Liang Lin** (National Center for  
 Research on Earthquake Engineering)  
 An Evaluation of Cost Effectiveness of New Technology for Seismic Mitigation in Gansu during Wenchuan Earthquake / **Yongfeng Du**  
 (Lanzhou University of Technology)  
 Approximate Incremental Dynamic Analysis using Modal Pushover / **Sang Whan Han** (Hanyang University)

**S7-1 Steel Structures (Building) 2 (Chair : James M. Ricles & Tomoshi Miyamura) W931**  
 Performance of Steel Frame Structures with Controlled Buckling Mechanism in the Knee Braces / **Hsieh-Lung Hsu**  
 (National Central University)  
 Shake Table Study of Dynamic Friction between Steel and Mortar for Seismic Applications in Structures / **Jason McCormick**  
 (University of Michigan)  
 Effect of Vertical Non-Uniform Ground Motion on Seismic Response of Large Span Structures / **Feng Liu** (Shandong University of  
 Science & Technology)  
 Cyclic Behavior and Collapse Mode of High Strength Steel H-Section Beams / **Kikuo Ikarashi** (Tokyo Institute of Technology)  
 Plastic Deformation Capacity and Post Buckling Behavior of H-Shaped Beam with Large Depth-Thickness Ratio under Cyclic Loading /  
**Tao Wang** (Tokyo Institute of Technology)  
 Crack Fracture of H-Section Cantilever Beam under Strong Cyclic Load / **Katsuhiko Goto** (Miyakonojo National College of  
 Technology)

**S7-2 Health Monitoring & Sensing System (Chair : Jerome P. Lynch & Tzu-Kang Lin) W932**  
 Experimental Validation of Market-based Control using Wireless Sensor and Actuator Networks / **Jerome P. Lynch** (University of Michigan)  
 Implementation of Bio-informatics on Structural Health Monitoring / **Tzu-Kang Lin** (National Center for Research on Earthquake  
 Engineering)  
 Structural Control using Global Vibration Sensing and Model Updating Based on Local Infrared Imaging / **Chun-Hung Lin**  
 (University of California, Santa Barbara)



Statistical-based Structural Damage Detection using Strain Power Mode Shape / **Eun Hyung Cho** (POSCO Engineering & Construction)  
Application of Different Continuous Wavelet Functions on Cylindrical Guided Wave Signals for Underground Pipe Inspection /  
**Rais Ahmad** (University of Connecticut)

**S7-3 Structural Concrete (Chair : Benson Shing & Hiroshi Matsuzaki) W933**

Piezoresistive Cement-Based Sensors For Real-time Structural Health Monitoring During Earthquakes / **Nemy Banthia**  
(The University of British Columbia)

A Precast Concrete Bent System for Bridges in Seismic Regions / **John Stanton** (University of Washington)

Experimental Study on Shear Failure Mechanism of Circular Reinforced Concrete Beams / **Ken Watanabe** (Tokyo Institute of Technology)

Experimental Study for Shear Carrying Capacity of Segmental Concrete Beams with External Tendons and Dry Joint /  
**Dinh Hung Nguyen** (Tokyo Institute of Technology)

Seismic Response of R/C Structures Subjected to Simulated Ground Motions Compatible with Design Spectrum / **Dae-Han Jun**  
(Dongseo University)

**S7-4 Socio-Economic Issues (Chair :Yasuhide Okuyama & Hideki Kaji ) W934**

Development of Integrated Disaster Information System and Information Management / **Kimiro Meguro** (The University of Tokyo)  
The Meanings of the Approval System for Business Continuity Ability of Construction Companies / **Hiroaki Maruya**  
(Tokyo Institute of Technology)

Mining Critical Infrastructure Interdependency Relationships to Mitigate Disasters using GSP / **Chien-Cheng Chou**  
(National Central University)

Economic Impacts Caused by Building and Transportation Infrastructure Damages : Application of Interregional Commodity Flow  
Model to the 1995 Hanshin Awaji Earthquake Disaster / **Yoshio Kajitani** (Central Research Institute of Electric Power Industry)

Relative Analysis between a Community Disaster Recovery Potential and Social Capital / **Emi Ishibashi** (University of Tsukuba)

Effectiveness of a Sports Festival Style of Disaster Drill by Picked Community Groups in Their Capacity Building for Responding to  
Earthquake Disasters / **Masaki Fujioka** (Tokyo Institute of Technology)

Globalization and Localization of Disaster Impact : Examination for Global Propagation / **Yasuhide Okuyama** (Tokyo Institute of Technology)

**S7-5 Geotechnical Engineering 6 (Soil-Pile Interactions) (Chair : Ross W. Boulanger & Mitsu Okamura) W935**

A 3D Soil-Structure Interaction Computational Framework / **Ahmed Elgamal** (University of California, San Diego)

Response Characteristics and Failure Mechanisms of Pile Foundations in Liquefiable Soil / **Sumanta Halder** (Indian Institute of Technology)

Effects of Spatial Variation of Laterally Spreading Ground on Stress Distributions within Pile Groups / **Hiroko Suzuki**  
(Tokyo Institute of Technology)

Kinematic Bending Moments of Piles : An Experimental Study / **Subhamoy Bhattacharya** (University of Bristol)

Simulation of Soil-pile-structure Interaction through Multi-dimensional Shaking Table Tests using E-Defense Facility / **Hiroyuki Yoshida**  
(Tokyo Electric Power Services Co., Ltd.)

Simulation Analyses of Shaking Table Test on Soil-pile-structure Model with Semi-rigid Pile Head Connections / **Sadayuki Ishizaki**  
(Taisei Corporation)

**S7-6 Innovative, Non-conventional Materials and Technologies for Earthquake Relief and Reconstruction (Chair : Yan Xiao & Jason Ingham) W936**

Bamboo As a Green Building Material / **Shyam K Paudel** (International Network for Bamboo and Rattan)

Fire Resistant Testing and Analysis of Light-gauge Steel Earthquake Disaster Relief Shelters / **Quan Zhou** (Institute of Modern  
Bamboo, Timber and Composite Structures)

Sustainable Rural House Design in Post-quake Reconstruction / **Hu Rongrong** (Xi'an University of Architecture and Technology)

Glulam Buildings for Earthquake Relief in Sichuan / **Bo Shan** (Hunan University)

Behavior of Concrete Horizontal-hole Hollow Block Masonry / **Wu Fangbo** (Hunan University)

Design and Construction of Lightweight Glulam Frame Residential Houses / **Guo Chen** (Hunan University)

**K7 Keynote Lecture 7 (Chair : Xilin Lu ) Main Hall 15:40 ~ 16:10**

**Stephen Mahin**, Director, PEER / Professor, University of California, Berkeley  
Seismic Performance of Concentrically Braced Steel Frames : Past and Future

**Closing Session (Chair : Ross W. Boulanger) Main Hall 16:10 ~ 16:30**

Award Presentation / **Kohji Tokimatsu** (Tokyo Institute of Technology)

Closing Remarks / **Saburoh Midorikawa** (Tokyo Institute of Technology)  
**Gregory G. Deierlein** (Stanford University)

**Short Field Trip to Tokyo Tech Buildings Retrofitted with Steel Dampers (EM : Toru Takeuchi)**  
Immediately after Closing Session, tour lasts approximately one hour.



# INDEX

Last	First	Session	Paper-ID	Last	First	Session	Paper-ID	Last	First	Session	Paper-ID
Abdelnaby	Adel	S3-3	11-377	Deierlein	Gregory	S3-2	Chair	Hui	Zhang	S6-2	08-266
Abe	Mariko	S3-3	17-334	Deierlein	Gregory	S4-H	08-243	Hui	Zhang	S6-2	Chair
Acuna	Marlon	S5-6	18-431	Derakhshani	Ali	S3-5	02-137	Hung	H.	S2-3	22-155
Adachi	Sou	S3-4	01-176	Ding	Jiemin	S2-H	10-442	Hussien	Mahmoud	S3-5	02-426
Afshin	Hassan	S3-1	04-237	Dizhur	Dmytro	S1-3	27-038	Hutchinson	Tara	S6-6	14-359
Ahmad	Rais	S7-2	08-446	Du	Yongfeng	S7-H	11-456	Hutchinson	Tara	S6-6	Chair
Akhlaghi	Hosseini	S2-2	09-093	Du	Yongfeng	S7-H	Chair	Hwang	Seong	S3-2	05-301
Algie	Thomas	S3-5	02-063	Dutta	Sekhar	S6-H	19-189	Ikarashi	Kikuo	S6-1	Chair
Anderson	John	K1	00-211	Dutta	Sekhar	S6-H	Chair	Ikarashi	Kikuo	S7-1	05-336
Anderson	John	S3-4	Chair	Elgamal	Ahmed	S3-5	Chair	Imai	Takashi	S4-3	23-036
Andrawes	Bassem	S3-6	20-234	Elgamal	Ahmed	S6-5	Chair	Ingham	Jason	S7-6	Chair
Ansal	Atilla	S1-4	01-461	Elgamal	Ahmed	S7-5	02-462	Inoue	Shusaku	S4-6	18-283
Ansal	Atilla	S1-4	Chair	Fahmy	Mohamed	S3-6	20-116	Ishibashi	Emi	S7-4	16-157
Asada	Hayato	S3-2	05-231	Faison	Heidi	S6-H	19-274	Ishii	Kazunori	S3-4	01-303
Baker	Jack	S6-4	01-271	Fangbo	Wu	S7-6	19-479	Ishizaki	Sadayuki	S7-5	02-230
Banazadeh	Mehdi	S1-H	10-053	Faravelli	Lucia	S3-6	Chair	Isoda	Hiroshi	S5-1	07-180
Banthia	Nemy	S5-3	Chair	Faravelli	Lucia	S4-3	23-269	Isoda	Hiroshi	S5-1	Chair
Banthia	Nemy	S7-3	26-443	Fierro	Eduardo	SL	00-478	Ito	Hiroshi	S2-H	10-131
Bardet	Jean	S6-4	Chair	Frankie	Thomas	S3-1	04-042	Iwata	Tomotaka	S4-4	01-194
Bensi	Michelle	S3-6	03-378	Fu	Tat	S6-4	01-276	Iwata	Tomotaka	S4-4	Chair
Bhattacharya	Subhamoy	S4-5	Chair	Fujii	Haruyuki	S5-2	17-293	Izawa	Jun	S1-5	02-286
Bhattacharya	Subhamoy	S7-5	02-056	Fujii	Shunji	S1-2	08-032	Izawa	Jun	S5-5	Chair
Bo	Shim	S1-1	04-424	Fujioka	Masaki	S7-4	16-119	J.Q.	Bao	S5-6	18-395
Boulanger	Ross	S3-5	Chair	Gao	Jinhe	S3-H	08-019	Jain	Ashok	S4-3	23-020
Boulanger	Ross	S6-5	02-350	Goto	Katsuhiko	S7-1	05-043	Jang	Won	S1-3	27-242
Boulanger	Ross	S7-5	Chair	Green	Russell	S1-4	01-606	Javelaud	Emmanuel	S3-4	01-025
Bozer	Ali	S1-2	08-246	Green	Russell	SL	00-701	Jayaram	Nirmal	S3-6	01-279
Brule	Stephane	S5-5	02-026	Grutas	Rhommel	S3-4	01-015	Jiangrong	Zhong	S6-H	19-152
Casciati	Fabio	S1-H	10-268	Hajjar	Jerome	S3-3	Chair	Jiao	Yu	S3-2	05-265
Casciati	Fabio	S2-H	Chair	Hajjar	Jerome	S4-H	08-244	Jones	Pierson	S3-2	05-317
Casciati	Fabio	S3-H	Chair	Halder	Sumanta	S7-5	02-130	Jun	Dae	S7-3	26-261
Casciati	Fabio	S6-H	27-329	Han	Sang	S7-H	11-326	Jung	DaJung	S3-1	04-363
Chau	Kam	S4-6	18-396	Hanazato	Toshikazu	S2-3	07-104	Kaji	Hideki	S5-4	Chair
Chavez-Garcia	Francisco	S1-4	01-267	Hanji	Takeshi	S6-3	25-434	Kaji	Hideki	S7-4	Chair
Chen	Guo	S7-6	19-469	Hayashi	Kazuyuki	S6-5	02-353	Kajitani	Yoshio	S7-4	16-357
Chen	Huei	S2-4	01-158	Hibino	Yo	S4-1	04-175	Kakinuma	Taro	S5-6	18-362
Chen	Yun	S1-H	10-453	Hikino	Tsuyoshi	S5-H	30-468	Kaneda	Katsunori	S6-1	05-118
Chi-yu	Jiao	S6-3	25-014	Hikino	Tsuyoshi	S5-H	Chair	Kanno	Hideto	S4-3	08-062
Cho	Eun	S7-2	08-149	Hiro-oka	Akihiko	S4-5	02-291	Kasai	Kazuhiko	K2	00-284
Choi	Se	S3-2	05-327	Hirose	Sohichi	S6-6	14-331	Kasai	Kazuhiko	S1-2	Chair
Chou	Chien	S7-4	16-073	Hisada	Yoshiaki	S4-4	01-191	Kasai	Kazuhiko	S3-H	Chair
Chung	Yulin	S3-2	05-296	Ho	Ivy	S3-1	27-398	Kasai	Kazuhiko	S5-H	Chair
Crewe	Adam	S1-1	04-162	Honda	Tsuyoshi	S4-5	02-380	Kaviani	Peyman	S3-6	20-285
Cui	Jintao	S2-2	24-298	Hsiao	Fu	S2-1	04-122	Kawashima	Kazuhiko	S3-6	Chair
Cui	Jintao	S2-2	Chair	Hsu	Hsieh	S6-1	Chair	Kawashima	Kazuhiko	S5-3	24-414
Cui	Yao	S3-2	05-294	Hsu	Hsieh	S7-1	05-050	Kawashima	Kazuhiko	SL	Chair
Dash	Suresh	S3-5	02-076	Huang	Baofeng	S2-2	09-066	Kikuchi	Masaru	S4-3	08-174
Deierlein	Gregory	S1-2	Chair	Huang	Chao	S4-1	04-005	Kinoshita	Koji	S6-3	25-435

Last	First	Session	Paper-ID	Last	First	Session	Paper-ID	Last	First	Session	Paper-ID
Kiryu	Satoshi	S2-5	02-186	Mahin	Stephen	K2	Chair	Naish	David	S3-1	04-372
Kishiki	Shoichi	S4-H	08-106	Mahin	Stephen	K7	00-241	Nakajima	Susumu	S1-5	02-376
Kitazume	Masaki	S6-5	02-310	Mahin	Stephen	S3-2	Chair	Nakamura	Naohiro	S2-H	10-081
Knox	Charlotte	S3-1	04-373	Mahmoud	Hussam	S3-2	05-272	Nakamura	Naohiro	S5-H	30-463
Kokusho	Takaji	S4-5	Chair	Marcillia	Syam	S3-3	17-361	Nakashima	Masayoshi	S5-H	Award Pre
Kokusho	Takaji	S5-5	02-481	Martinez-Rueda	Juan	S7-H	07-314	Nakazawa	Shoji	S6-2	08-164
Kolesov	Sergey	S5-6	18-413	Maruya	Hiroaki	S7-4	16-184	Nguyen	Dinh	S7-3	26-168
Kondo	Shinya	S6-6	14-342	Maruyama	Yoshihisa	S5-4	12-171	Nishimura	Koshiro	S1-1	04-147
Kono	Susumu	S4-1	04-188	Masoudi	Mostafa	S3-3	10-472	Niwa	Junichiro	S3-1	Chair
Kono	Susumu	S4-1	Chair	Matsuda	Kazuhiro	S5-1	07-223	Niwa	Junichiro	S5-3	Chair
Koshimura	Shunichi	S4-6	18-417	Matsuda	Takashi	S1-5	02-306	Nojima	Nobuoto	S4-2	03-352
Kumagai	Tomohiko	S6-2	08-233	Matsui	Ryota	S3-H	08-263	Nojima	Nobuoto	S4-2	Chair
Kuramoto	Hiroshi	S1-1	Chair	Matsumoto	Hiroyuki	S4-6	18-375	Numada	Muneyoshi	S1-5	02-240
Kuramoto	Hiroshi	S2-1	04-210	Matsumoto	Koji	S2-3	22-077	Ogawa	Toshiyuki	S6-2	Chair
Lam	Eddie	S1-3	04-397	Matsuoka	Masashi	S6-4	01-321	Ohmachi	Tatsuo	S3-3	Chair
Lau	David	S3-6	Chair	Matsuzaki	Hiroshi	S7-3	Chair	Ohmachi	Tatsuo	S4-6	Chair
Lau	David	S5-3	24-022	McCormick	Jason	S7-1	05-082	Ohmachi	Tatsuo	S5-6	Chair
Lau	David	S4-2	Chair	McGann	Christopher	S3-5	02-387	Ohno	Ryuzo	S3-3	Chair
Lee	Chung	S4-5	02-358	Meguro	Kimiro	S6-H	19-348	Ohno	Ryuzo	S5-2	Chair
Li	Suchao	S3-H	08-340	Meguro	Kimiro	S6-H	Chair	Ohno	Susumu	S4-4	01-335
Li	Yeou	S4-1	04-018	Meguro	Kimiro	S7-4	16-338	Ohtsuka	Takahiro	S6-6	14-386
Li	Zhen	S3-H	08-113	Meshitsuka	Yusuke	S5-2	17-311	Ohtsuka	Takahiro	S6-6	Chair
Lignos	Dimitrios	S6-1	05-193	Midorikawa	Mitsumasa	S4-H	08-167	Okada	Takao	S4-3	23-433
Lin	Chun	S7-2	08-139	Midorikawa	Saburoh	K1	Chair	Okamura	Mitsu	S6-5	02-309
Lin	Jui	S7-H	11-114	Midorikawa	Saburoh	S3-4	Chair	Okamura	Mitsu	S7-5	Chair
Lin	Tzu	S7-2	08-161	Midorikawa	Saburoh	S6-4	01-280	Okawa	Izuru	S4-4	01-170
Lin	Tzu	S7-2	Chair	Midorikawa	Saburoh	S6-4	Chair	Okuyama	Yasuhide	S7-4	16-209
Lindt	John	S5-1	07-084	Miki	Chitoshi	K5	Chair	Okuyama	Yasuhide	S7-4	Chair
Lindt	John	S5-1	Chair	Miki	Tomohiro	S1-3	27-445	Ono	Kiyoshi	S3-6	Chair
Liu	Feng	S7-1	05-138	Miki	Tomohiro	S2-3	Chair	Ono	Kiyoshi	S6-3	25-437
Liu	Shih-Chi	K6	Chair	Miura	Hiroyuki	S1-4	Chair	Ono	Kiyoshi	S6-3	Chair
Loh	Chin	S1-1	Chair	Miura	Hiroyuki	S6-4	01-148	Onoue	Atsuo	S1-5	02-308
Loh	Chin	S2-1	04-008	Miyamura	Tomoshi	S6-1	05-163	Orense	Rolando	S1-5	Chair
Lombardi	Domenico	S3-5	02-115	Miyamura	Tomoshi	S7-1	Chair	Orense	Rolando	S2-5	02-021
Lu	Jinchi	S4-5	02-460	Mohsen	Ayman	S2-4	01-205	Osaragi	Toshihiro	S5-2	17-277
Lu	Xilin	K7	Chair	Moon	Ki	S3-2	05-300	Ozel	Oguz	S1-4	01-195
Lu	Xilin	S1-2	08-415	Morgan	Troy	S1-H	10-299	Ozturk	Baki	S2-1	04-034
Lu	Xilin	S3-3	Chair	Morgan	Troy	S2-H	Chair	Pant	Deepak	S3-6	20-332
Lu	Xilin	S4-3	Chair	Morikawa	Hitoshi	S2-4	01-390	Panyakapo	Phaiboon	S2-1	04-105
Lu	Zheng	S3-H	08-416	Morikawa	Hitoshi	S2-4	Chair	Park	Heon	S6-4	01-319
Lynch	Jerome	S4-3	Chair	Morita	Masashi	S3-1	04-302	Park	Sangjoon	S3-1	04-212
Lynch	Jerome	S7-2	08-103	Motoki	Kentaro	S2-4	01-292	Paudel	Shyam	S7-6	19-425
Lynch	Jerome	S7-2	Chair	Motoyui	Shojiro	S2-2	09-392	Paudyal	Youb	S5-4	12-430
Ma	Gao	S3-1	04-405	Motoyui	Shojiro	S2-2	Chair	Peilei	Yan	S3-1	04-381
Ma	Yifei	S3-3	11-028	Moustafa	Abbas	S7-H	11-401	Penzien	Joseph	K4	
MacRae	Gregory	S1-H	Chair	Moustafa	Abbas	S7-H	Chair	Pitilakis	Kyriazis	K3	00-452
MacRae	Gregory	S2-H	10-016	Mukhopadhyay	Parthasarathi	S5-1	07-177	Pitilakis	Kyriazis	S5-5	Chair
Madurapperuma	Kavinda	S3-6	20-330	Nagai	Toshihiko	S4-6	18-383	Polat	Orhan	S1-4	01-060

Last	First	Session	Paper-ID	Last	First	Session	Paper-ID	Last	First	Session	Paper-ID
Pryor	Steven	S1-2	08-121	Suita	Keiichiro	S6-1	05-369	Wenxue	Du	S3-1	04-328
Pu	Wuchuan	S3-3	10-166	Sun	Chang	S6-6	14-206	Wight	James	S1-1	04-006
Putra	Ika	S5-2	17-511	Sung	Yu	S1-H	Chair	Wight	James	S2-1	Chair
Putra	Ika	S5-2	Chair	Sung	Yu	S2-H	10-156	Wijeyewickrema	Anil	S4-6	Chair
Qian	Zheng	S3-4	01-010	Sutcu	Fatih	S6-H	22-048	Wijeyewickrema	Anil	S5-6	Chair
Qu	Zhe	S3-1	04-455	Suzuki	Haruhiko	S4-4	01-023	Wotherspoon	Liam	S3-4	01-030
Quan	Guilian	S3-6	20-320	Suzuki	Hiroko	S6-5	Chair	Xiao	Yan	S7-6	Chair
Quinay	Pher	S3-4	01-129	Suzuki	Hiroko	S7-5	02-260	Xiong	Haibei	S4-1	04-044
Razzaq	Muhd	S3-H	20-037	Suzuki	Moriaki	S6-3	25-436	Yamada	Satoshi	S3-2	Chair
Ricles	James	S1-2	08-182	Suzuki	Moriaki	S6-3	Chair	Yamada	Satoshi	S6-1	05-142
Ricles	James	S4-H	Chair	Suzuki	Takuya	S1-2	08-097	Yamamoto	Yosuke	S3-H	08-451
Ricles	James	S7-1	Chair	Tada	Motohide	S6-1	05-145	Yamanaka	Hiroaki	S3-4	Chair
Rofooei	Fayaz	S1-H	10-467	Tada	Taku	S2-4	01-197	Yamanaka	Hiroaki	S4-4	01-012
Rongrong	Hu	S7-6	19-295	Takahashi	Akihiro	S1-5	02-312	Yamanaka	Hiroaki	S4-4	Chair
Sadeghi	Mehdi	S3-5	03-346	Takahashi	Akihiro	S2-5	Chair	Yamashita	Tadamichi	S5-H	30-465
Sakata	Hiroyasu	S3-1	Chair	Takahashi	Toru	S4-4	01-187	Yamazaki	Fumio	S5-4	12-196
Sakata	Hiroyasu	S5-1	07-146	Takemura	Jiro	S1-5	Chair	Yamazaki	Yoshihiro	S3-H	08-282
Sakurai	Kotaro	S3-3	11-264	Takemura	Jiro	S3-5	Chair	Yao	Xiaowen	S3-6	20-475
Sathiparan	Navaratnarajah	S3-6	20-333	Takemura	Jiro	S6-5	02-290	Yashiro	Kazuhide	S2-5	02-289
Sause	Richard	K5	00-450	Takeuchi	Toru	S3-2	Chair	Yin	Qiang	S3-H	08-132
Sause	Richard	S2-3	Chair	Takeuchi	Toru	S4-H	Chair	Yin	Shih	S6-3	25-033
Sawada	Kouhei	S3-5	02-288	Takeuchi	Toru	S6-2	08-144	Yokota	Hiroshi	S1-3	27-448
Seo	Jeong	S6-4	01-239	Tamura	Shuji	S4-5	02-307	Yoneda	Harumi	S5-H	30-464
Shakya	Kabir	S2-3	22-169	Tanaka	Kentaro	S6-3	25-439	Yoshida	Hiroyuki	S7-5	02-281
Shan	Bo	S7-6	19-471	Tao	Dongwang	S3-4	01-423	Yoshida	Nozomu	S2-5	02-305
Shaoge	Cheng	S4-1	04-128	Thompson	Eric	S3-4	01-341	Yoshimura	Masahiro	S3-3	17-120
Shaoge	Cheng	S4-1	Chair	Tiehua	Shi	S1-3	27-127	Yu	Yi	S3-2	05-297
Sharp	Geoff	S1-H	10-318	Tohari	Adrin	S2-5	02-232	Zafra	Richelle	S3-6	20-324
Shibayama	Shuhei	S3-5	02-287	Tokimatsu	Kohji	K3	Chair	Zavala	Carlos	S5-4	12-181
Shimomura	Takumi	S1-3	Chair	Tokimatsu	Kohji	S3-5	Chair	Zavala	Carlos	S5-4	Chair
Shimomura	Takumi	S2-3	22-444	Tokimatsu	Kohji	S5-5	02-322	Zhang	Yongle	S3-3	10-476
Shing	Benson	S1-3	Chair	Tonuk	Gokce	S3-4	01-482	Zhao	Gengwen	S3-3	11-024
Shing	Benson	S5-3	24-447	Tsubota	Shinsuke	S3-3	17-402	Zhou	Quan	S7-6	19-470
Shing	Benson	S7-3	Chair	Uchida	Yuichi	S5-3	24-441				
Shiohara	Hitoshi	S1-1	04-159	Ueda	Kyohei	S3-5	02-449				
Shiohara	Hitoshi	S2-1	Chair	Upegui-Botero	Fabio	S3-4	01-083				
Shiozaki	Yoshimitsu	S5-2	17-454	Venkatesan	Aditya	S3-H	08-035				
Shizhou	Yu	S4-2	03-275	Wada	Akira	K6	00-657				
Shoji	Gaku	S4-2	03-360	Wada	Akira	S3-H	Chair				
Shumuta	Yoshiharu	S4-2	03-351	Wallace	John	S3-1	Chair				
Si	Hongjun	S1-4	01-204	Wang	Tao	S7-1	05-112				
Sobhaninejad	Gholamreza	S3-H	08-379	Warnitchai	Pennung	S5-4	12-480				
Sogabe	Masamichi	S2-3	22-440	Wartman	Joseph	S2-5	Chair				
Spencer	Bill	K4	Chair	Wartman	Joseph	S5-5	02-466				
Spencer	Bill	S3-H	Chair	Watanabe	Ken	S7-3	26-438				
Stanton	John	S3-1	Chair	Wen	Kuo	S2-4	01-192				
Stanton	John	S7-3	26-273	Wen	Kuo	S2-4	Chair				
Stavridis	Andreas	S3-2	05-096	Wen	Kuo	S3-4	Chair				

