9th CUEE and 4th ACEE Joint Conference

March 6th-8th, 2012

In commemoration of the First Anniversary of the Great East Japan Earthquake

9th International Conference on Urban Earthquake Engineering

4th Asia Conference on Earthquake Engineering

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

Greetings!

It is a great pleasure to welcome all to this specially coordinated event combining two major international conferences on earthquake engineering:

The Ninth International Conference on Urban Earthquake Engineering (9CUEE) and The Fourth Asia Conference on Earthquake Engineering (4ACEE).

The 9th CUEE forms an integral part of the research activities of the Center for Urban Earthquake Engineering (CUEE), Tokyo Institute of Technology. CUEE is the Global Center of Excellence (COE) in the field of earthquake engineering, supported by the Japan Ministry of Education, Culture, Sports, Science and Technology. The CUEE Conference has been convened annually, since fiscal year 2003 under two consecutive COE programs. This conference will foster and stimulate intensive information dissemination and technology transfer, all in promoting and extending an international network directed toward the formation of younger researchers through sustained international collaborative effort.

The 4th ACEE will comprise the Association of Structural Engineers of the Philippines Inc. (ASEP), the Asian Institute of Technology (AIT), and the Engineering Institute of Thailand (EIT). Since the 1st ACEE held in Manila, Philippines, in 2004, the conference has been addressing "Seismic Hazards and Damage Mitigation in the Asian Region" by providing an excellent forum that brings together Asian researchers, professionals, engineers, scientists, and academics to promote and exchange new ideas and experiences in the broader fields of seismology, earthquake engineering, seismic risk, and disaster mitigation.

We, the joint organizers of the 9CUEE and 4ACEE, are excited by the opportunity to combine the two conferences. This year the Joint Conference affords a platform not only to share overall common interests, as well as new information and technologies in the field of urban earthquake engineering, but also to make research and educational outcomes available while implementing an ever strengthening worldwide network for earthquake engineering.

The Joint Conference gives special prominence to Keynote Talks on various themes reflecting state-of-the-art developments in urban earthquake engineering, followed by about 300 presentations in parallel sessions, and this year will also include a blind analysis contest of an E-defense shaking table test. We will also feature, as the conference has done each year, Special Educational Sessions and Best Presentation Awards for Young Researchers. Some one hundred papers will be given in these sessions. To facilitate conference participation of this younger generation, Travel Grants have been awarded this year again to some fifty individuals.

Special sessions are also planned on the 11th March **2011 Great East Japan Earthquake**, in observance of the first anniversary of the event that resulted in catastrophic damage in northeast Japan and a death toll of about 20,000. We wish to extend sincere sympathy to those who experienced this tragedy, while vowing to work toward the future mitigation of such occurrences and resultant loss of life. We believe it is enormously important and useful to exchange and share the lessons learned in the year since this catastrophic earthquake. Our hope is that the 9CUEE & 4ACEE Joint Conference will be an excellent opportunity for all of us dedicated to urban earthquake engineering.

Kohji Tokimatsu Global-COE Program Leader and Director of CUEE/ Tokyo Tech

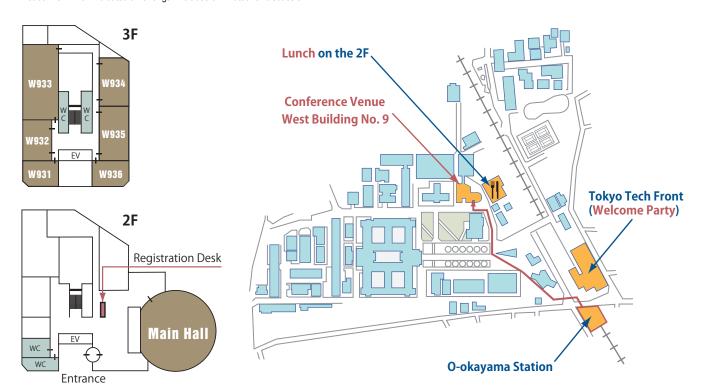
SESSION SCHEDULE TABLE

	Tuesday, March 6th												
Ī	Main Hall(2F)	W931(3F)	W932(3F)	W933(3F)	W934(3F)	W935(3F)	W936(3F)						
		Registration											
9	Opening Session	Beginning at 9:30 AM											
7	K1 Keynote 1	James Ricles, Professor, Lehigh University											
0	K2 Keynote 2	Kazuhiko Kawashima, Professor, Tokyo Institute of Technology											
-	K3 Keynote 3	Masato Motosaka, Professor, Graduate School of Engineering, Tohoku University											
1	•	Julio Ramirez, Chief Officer, NEEScomm Center, Purdue University											
-1	K4 Keynote 4	Julio Ramirez, Chief Officer, NEEScomm Center, Purdue University Group Photo Session											
2		▼ Lunch											
3	S1-H	<i>\$1-1</i>	<i>\$1-2</i>	<i>S1-3</i>	<i>\$1-4</i>	<i>\$1-5</i>							
_	Earthquake	Casia assumuis	Advanced		Structural	Lessons Learnt -							
4	Engineering	Socio-economic	Technologies & Information and	Engineering	Engineering -	Great East Japan Earthquake							
	Practice	Issues	Computing Technology	Seismology	Concrete	& Others							
5	S2-H	<i>\$2-1</i>	S2-2	<i>\$2-3</i>	S2-4	\$2-5							
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_ :	Engineering -	Tsunami	Advanced	Engineering	Engineering -	Great East Japan							
6	Steel	i Sullailli	Technologies	Seismology	Concrete	Earthquake							
=	Steel				Concrete	& Others							
8	Welcome Party Tokyo Tech Front												
9													
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9 :	Main Hall(2F)	W931(3F)	W932(3F)	W933(3F)	W934(3F)	W935(3F)	W936(3F)						
9 :	<i>\$3-Н</i>	W931(3F)	W932(3F) \$3-2		W934(3F) \$3-4	S3-5	<i>\$3-6</i>						
	<i>S3-H</i> Young	W931(3F)	W932(3F) \$3-2 Young Researchers Session (Advanced	W933(3F) \$3-3	W934(3F) <i>\$3-4</i> Young	<i>\$3-5</i> Young	<i>\$3-6</i> Young						
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9 1 2 3 4	S3-H Young Researchers Session (Structural Engineering- Steel & Others) S4-H Structural Engineering - Steel	S4-1 Non-Structural Components and Contents	S3-2 Young Researchers Session (Advanced Technologies, Information and Computing Technology, Earthquake Engineering Practice & New Design Criteria and Methods) S4-2 New Design Criteria and Methods	Young Researchers Session (Engineering Seismology) Lunch \$4-3 Engineering	Young Researchers Session (Structural Engineering - Concrete, Bridge and Others) S4-4 Structural Engineering - Concrete	S3-5 Young Researchers Session (Geotechnical Engineering) S4-5 Geotechnical Engineering	\$3-6 Young Researchers Session (Tsunami, Human Behavior & Socio-economic Issues)						
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9 1 2 3 4	S3-H Young Researchers Session (Structural Engineering- Steel & Others) S4-H Structural Engineering - Steel S5-H Structural	S4-1 Non-Structural Components and Contents S5-1 Earthquake Loss	Young Researchers Session (Advanced Technologies, Information and Computing Technology, Earthquake Engineering Practice & New Design Criteria and Methods) S4-2 New Design Criteria and Methods S5-2 Blind Analysis	Young Researchers Session (Engineering Seismology) Lunch \$4-3 Engineering	Young Researchers Session (Structural Engineering - Concrete, Bridge and Others) S4-4 Structural Engineering - Concrete S5-4 Structural	S3-5 Young Researchers Session (Geotechnical Engineering) S4-5 Geotechnical Engineering	\$3-6 Young Researchers Session (Tsunami, Human Behavior & Socio-economic Issues)						
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	Thursday, March 8th													
	Main Hall(2F)	W931(3F)	W932(3F)	W933(3F)	W934(3F)	W 935(3F)	W936(3F)							
9			<i>\$6-2</i>	<i>\$6-3</i>	<i>S6-4</i>	<i>\$6-5</i>								
10			Structural Engineering - Bridge	Response Records	Structural Engineering - Concrete & Others	Geotechnical Engineering								
12	" Lunch													
13	87-H													
14 15	Saburoh Midorikawa, Professor, Tokyo Institute of Technology Shigeo Takahashi, President, Port and Airport Research Institute Kohji Tokimatsu, Professor, Tokyo Institute of Technology Akihiro Takahashi, Associate Professor, Tokyo Institute of Technology Yasuko Kuwata, Associate Professor, Department of Civil Engineering, Kobe University Toru Takeuchi, Professor, Tokyo Institute of Technology Junichiro Niwa, Professor, Tokyo Institute of Technology Hitomi Murakami, Associate Professor, Yamaguchi University Graduate School of Sci. and Engineering Hideki Kaji, Professor, Tokyo Institute of Technology													
10]	Closing Session													

Allocated times for each speaker would be:

- ·30 min. for Keynote Lecture in each Main Session
- ·20-25 min. for Invited Lectures in Parallel Sessions
- ·15-20 min. for presentation in the Great East Japan Earthquake Session
- ·15 min. for other presentations in Parallel Sessions
- ·12 min. for each presentation in Young Researchers Sessions
- * Please NOTE: full indicated time-length includes 3 minutes for discussion.



West Bulding No. 9

Conference Venue

REGISTRATION CATEGORIES:

Full Registration (Red Tag): Sessions, *Proceedings*, Lunches, Welcome Party, and Banquet Basic/ Student Registration (Yellow Tag): Sessions, *Proceedings*, Lunches, and Welcome Party Free/ On-Site Registration (Blue Tag): Sessions and *Proceedings* only

ADDITIONAL EVENT TICKETS: Banquet (Red Seal) Welcome Party (Green Seal)

Tuesday, March 6th

Opening Session (Chair: Kazuhiko Kasai) Main Hall 9:30 - 10:00

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

Guidance of Young Researchers Session / **Troy Morgan** (Tokyo Institute of Technology)

KN1 Keynote Lecture 1 (Chair : Kazuhiko Kasai) Main Hall 10:00 - 10:30

Real-Time Hybrid Simulation and Application to Earthquake Engineering / James Ricles (Lehigh University)

KN2 Keynote Lecture 2 (Chair : Stephen Mahin) Main Hall 10:30 - 11:00

Damage of Bridges due to the 2011 Great East Japan Earthquake / **Kazuhiko Kawashima** (Tokyo Institute of Technology)

KN3 Keynote Lecture 3 (Chair : Saburoh Midorikawa) Main Hall 11:00 - 11:30

Dynamic Characteristics of a Damaged 9-Story Building During the 2011 off the Pacific Coast Tohoku Earthquake / **Masato Motosaka** (Graduate School of Engineering, Tohoku University)

KN4 Keynote Lecture 4 (Chair : Junichiro Niwa) Main Hall 11:30 - 12:00 Noon

The George E. Brown Jr., Network for Earthquake Engineering Simulation (NEES): Reducing the Impact of Earthquakes and Tsunamis on Society / **Julio Ramirez** (NEEScomm Center, Purdue University)

Group Photo 12:00 - 12:15

Parallel Session 1 13:15 - 15:15

S1-H Earthquake Engineering Practice (Cochairs : Adam C. Abinales & Hiroyasu Sakata) Main Hall

Test and analysis on shear walls with replaceable devices under cyclic loading for earthquake resilient structures / **Xilin Lu** (State Key Laboratory of Disaster Reduction in Civil Engineering)**

Comparative Study on Failure Patterns and Code Specified Design Approaches of RC Structures for Strong Earthquakes in China and Japan / **Yingmin Li** (Chongqing University)

Correlation Study on the Effects of the Great Tohoku Earthquake and the Philippine Seismic Code Provisions / **Carlos Villaraza** (Association of Structural Engineers of the Philippines)

Socio-economic Issues (Cochairs: Hideki Kaji & Yasuhide Okuyama) W931

Socioeconomic Issues of the Tohoku Pacific Ocean Earthquake Disaster / **Hideki Kaji** (CUEE, Tokyo Institute of Technology)

Proposal for Improvement of Business Continuity Plan (BCP) Based on the Lessons of the Great East Japan Earthquake / **Hiroaki Maruya** (Tokyo Institute of Technology)

BCP of local authorities in Japan against disaster event / **Jun Izumi** (Nagoya Sangyo University)

Restoration of Fishing Industry's Supply Chain after the Great East Japan Earthquake / **Toshinori Nemoto** (Hitotsubashi Univ)

Using Information Systems for Recovery and Reconstruction after the Great East Japan Earthquake / **Kayoko Yamamoto** (University of Electro-Communications)

Long-run Effects of a Disaster: Structural Analysis / Yasuhide Okuyama (University of Kitakyushu)

S1-2 Advanced Technologies and Information and Computing Technology (Cochairs : Keri Ryan & Kazuhiko Kasai) W932

GIS Tool for Calculating Repair Cost of Buildings due to Earthquake Effects (CCRE - CISMID) / **Miguel Estrada** (CISMID - National University of Engineering)

Response Control of Adjacent Structures Connected with Semi-Active Variable Friction Damper / **Chirag Patel** (Sir, Padampat SInghania University)

Seismic evaluation and retrofit of the iconic LAX theme building with a mass damper: Analytical and experimental approach /

H. Kit Miyamoto (Miyamoto International)

Responses of Tall Buildings in Tokyo during the 2011 Tohoku Pacific Earthquake / **Kazuhiko Kasai** (Tokyo Institute of Technology)**

S1-3 Engineering Seismology (Cochairs: Pierre-Yves Bard & Hiroaki Yamanaka) W933

Ground Motion on Densely Urbanized Soft Soil Areas: a Review about Effects of Site-City Interaction / **Pierre-Yves Bard** (Institut des Sciences de la Terre)**

Analysis of Nonlinear Soil Response During the 2010 Darfield, New Zealand Earthquake Sequence / **Kuo-Liang Wen** (Institute of Geophysics, National Central University)**

Estimation of Bedrock Structure from Microtremor Measurements in Kochi Plain, Japan / **Hiroshi Arai** (National Institute for Land and Infrastructure Management)

S-wave velocity structure estimated by the SPAC method using array microtremors data in Oyama, Tochigi Prefecture / **Seiji Tsuno** (Tokyo Institute of Technology)

Preliminary analysis of very dense seismic-array-observation data in Furukawa, Miyagi, Japan / **Hitoshi Morikawa** (Dept. Built Environment, Tokyo Institute of Technology)

Significance of Rotating Ground Motions on Nonlinear Behavior of Symmetric and Asymmetric Buildings in Near Fault Sites / **Juan Reyes** (Universidad de los Andes, Bogota, Colombia)

Wave propagation analysis of a ground with three-dimensional irregularities / **Shoichi Nakai** (Chiba University)

Structural Engineering - Concrete (Cochairs : Johann Kollegger & Tomohiro Miki) W934

Survey to Bridges Damaged by Ground Motion of the 2011 Earthquake off the Pacific Coast of Tohoku / **Ichiro Iwaki** (College of Engineering, Nihon University)**

Large-scale parallel computation for failure analysis of reinforced concrete structure by wave force / **Seizo Tanaka** (Earthquake Research Institute, University of Tokyo)

Effect of Polypropylene Fiber Reinforced Cement Composites for Enhancing the Seismic Performance of a Full-scale Bridge Column Based on E-Defense Shake Table Excitation / **Richelle Zafra** (University of the Philippines Los Banos)

Shear behavior of RC deep beams having circular cross-section under anti-symmetric moment / **Koji Matsumoto** (Tokyo Institute of Technology)

Response of columns in reinforced concrete buildings impacted by different types of tsunami water-borne shipping containers / **Kavinda Madurapperuma** (Tokyo Institute of Technology)

S1-5 Lessons Learnt - Great East Japan Earthquake & Others

(Cochairs : Robert Kayen & Jiro Takemura) W935

Recent Activities of JST-JICA Project on Earthquake and Tsunami Disaster Mitigation in Peru / **Tadahiro Kishida** (Chiba University)

Urban Planning Process for Recovery through Comparison of Miyagi and Iwate prefectures / **Shoichi Ando** (Int'l Institute of Seismology and Earthquake Engineering BRI)

Site Response Analysis Using Downhole Array Recordings During the March 2011 Tohoku, Japan, Earthquake / **Youssef Hashash** (University of Illinois at Urbana-Champaign)

Geotechnical Deformations at Ground Failure Sites from the March 11, 2011 Great Tohoku Earthquake, Japan: Field Mapping, LIDAR Modeling, and Surface Wave Investigation / **Robert Kayen** (US Geological Survey)

Failure of Fujinuma Dam During the 2011 Tohoku Earthquake / **Daniel Pradel** (University of California Los Angeles/Group Delta Consultants)

Parallel Session 2 15:15 - 17:15

52-H Structural Engineering - Steel (Cochairs : Jerome Hajjar & Toru Takeuchi) Main Hall

Design Features and Criteria for Controlled Rocking Braced-Frame Systems / **Gregory Deierlein** (Stanford University)

Seismic Design and Stability Assessment of Composite Framing Systems / **Jerome Hajjar** (Northeastern University)

Out-of-plane Stability of Buckling Restrained Braces including their Connections / **Toru Takeuchi** (Tokyo Institute of Technology)

Out-of-Plane Stability of Buckling-Restrained Braces / **Taichiro Okazaki** (Hokkaido University)

Experimental and Analytical Validation of Steel Dual-Core Self-Centering Braces for Seismic-Resisting Structures / **Chung-Che Chou** (Department of Civil Engineering, National Taiwan University)

52-1 Tsunami (Cochairs : Anil C. Wijeyewickrema & Tatsuo Ohmachi) W931

Tsunami Intensity and Displaced Water Volume / **Mikhail Nosov** (M.V.Lomonosov Moscow State University, Faculty of Physics)**

Characteristics of bottom pressure sensors of dense ocean-floor network system for earthquakes and tsunamis / **Hiroyuki Matsumoto** (Japan Agency for Marine-Earth Science and Technology)

The comparison of source models of the 2011 Tohoku tsunami / **Sergey Kolesov** (Moscow State University, Physics faculty) Interpretation of tsunami flow characteristics by video analysis / **Shunichi Koshimura** (Tohoku University)

Capturing the impacts : 3D scanning after the 2011 Tohoku Earthquake and Tsunami / **Michael Olsen** (Oregon State University)

Assessment of tsunami hazards to quay structures / **David Bu** (Royal Haskoning)

S2-2 Advanced Technologies (Cochairs : Giuseppe Oliveto & H. Kit Miyamoto) W932

Mixed Lagrangian Formulation for Dynamic and Earthquake Response of 2D Hybrid Base Isolation Systems / **Giuseppe Oliveto** (University of Catania)**

Optimum Design of Hysteretic Dampers for Vibration Control of RC Building Structures / **Wuchuan Pu** (Dept. of Civil Engineering, Wuhan University of Technology)

Dynamic response of base isolated NPPs under long period seismic excitations / **Dookie Kim** (Kunsan National University)

A Reliability-Based Bounding Analysis Methodology for Seismic Isolated Buildings / **Troy Morgan** (Tokyo Institute of Technology)

Seismic performance of damped structure subjected to large earthquakes / Akira Wada (Tokyo Institute of Technology)**

S2-3 Engineering Seismology (Cochairs : Benito Pacheco & Hiroyuki Miura) W933

Studies on Vulnerability Risk Factor Management of Buildings against Earthquake, Severe Wind and Flood in the Philippines / **Benito Pacheco** (University of the Philippines Diliman)**

Preliminary Analysis for Building Damage Detection from High-Resolution SAR Images of the 2010 Haiti Earthquake / **Hiroyuki Miura** (Tokyo Institute of Technology)

Coseismic Displacement Measurement for the 2010 El Mayor (Baja California), Mexico Earthquake from Optical Image-based Subpixel Correlation / **Masashi Matsuoka** (Geological Survey of Japan, AIST)

Detection of Flooded Areas by the Tohoku Earthquake/Tsunami Using ASTER Thermal Infrared Images / **Fumio Yamazaki** (Chiba University)

Observation and Activities of the Tohoku-oki Earthquake by Earth Observation Satellite, ALOS and others / **Ryoichi Furuta** (RESTEC)

Estimation of Tsunami-Inundated Areas in Asahi City, Chiba Prefecture after the 2011 off the Pacific Coast of Tohoku Earthquake based on Visual Inspection of Satellite Images / **Yoshihisa Maruyama** (Chiba University)

S2-4 Structural Engineering - Concrete (Cochairs : Naveed Anwar & Koji Matsumoto) W934

Lighter Bridges with the Balanced Lift Method / Johann Kollegger (Vienna University of Technology)**

Effect of Section Re-Profiling on Axial Load and Deformation Capacities of FRP-Confined RC Rectangular Compression Members / **Kiang Hwee Tan** (National University of Singapore)**

Use of FRP to Rehabilitate Poorly Detailed Lap Splices of RC Columns / InSung Kim (Degenkolb Engineers)

Experimental Study on Bond Behavior between Corroded Reinforcing Bar and Concrete subjected to Cyclic Loading /

Tomohiro Miki (Department of Civil Engineering, Kobe University)

Load-Carried Capacity of Steel Reinforced Concrete Short Beams in Frame Structures Subjected to the Seismic Loading / **Ken Watanabe** (Railway Technical Research Institute)

Tension Stiffening in Reinforced High Performance Fiber Reinforced Cement-Based Composites (HPFRCC) / **Daniel Moreno** (Stanford University)

S2-5 Lessons Learnt - Great East Japan Earthquake & Others

(Cochairs: Ross Boulanger & Yoshimichi Tsukamoto) W935

Liquefaction caused by the 2011 off the Pacific coast of Tohoku Earthquake and the result of the prior microtremor measurement / **Jun Saita** (System and Data Research Co., Ltd.)

Observed performance and estimated soil profiles of reclaimed and natural deposits at Kamisu City during 2011 Great East Japan Earthquake / **Yoshimichi Tsukamoto** (Department of Civil Engineering, Tokyo University of Science)

Seismic vibration characteristics of building and surface soil in Chiba city before and after the 2011 Tohoku earthquake / **Toru Sekiguchi** (Chiba University)

Piled raft foundation with grid-form ground improvement subjected to the 2011 earthquake / **Akihiko Uchida** (Takenaka Corporation)

Earthquake-induced geotechnical damages observed during the 2010 and 2011 Canterbury Earthquakes / **Suguru Yamada** (The University of Tokyo)

Liquefaction Potential Mapping in Bantul District, Jogjakarta Province, Indonesia / **Adrin Tohari** (Indonesian Institute of Sciences, RC for Geotechnology)

Welcome Party (Chair: Jiro Takemura) Tokyo Tech Front 17:30 - 19:30

Wednesday, March 7th

Parallel Session 3 9:00 - 13:00

S3-H Young Researchers Session (Structural Engineering - Steel)

(Cochairs: Gregory Deierlein & Kikuo Ikarashi) Main Hall

Seismic Effects of the 2011 Tohoku, Japan Earthquake on Steel Buildings / **Dimitrios Lignos** (McGill University)

Experimental Testing of Self-Centering Steel Plate Shear Walls / **Jeffrey Berman** (University of Washington)

Resistant behavior of column-base with rotational rigidity control function in Low & Medium steel structure / **Teruaki Yamanishi** (Tokyo Institute of Technology)

Modeling Fracture Behavior in the Simulation of Special Concentrically Braced Frames / **Po-Chien Hsiao** (University of Washington)

Experimental Study on Performance of the "Web-clamped" Beam-to-Column Connection / **Keita Araki** (Dept of Architecture, Grad. School of Eng., Univ of Tokyo)

Experimental Study on Friction of Steel-Mortar and Graphite Lubrication for Development of Free Standing Structure / **Ryuta Enokida** (Kyoto University)

Loading Experiments of the damaged TP 316 Stainless Pipe / **Seock Jin Choi** (Busan University)

Bi-axial Bending Behavior of RHS-columns Including Post-buckling and Deterioration Range / **Takanori Ishida** (Tokyo Institute of Technology)

Experimental Study of Exposed Column Base in Buckling Restrained Braced Frames / **Yao Cui** (Tokyo Institute of Technology)
Study on Shake-Table Experimental Results Regarding Composite Action of a Full-Scale Steel Building Tested to Collapse / **Nam Tran-Tuan** (Tokyo Institute of Technology)

Strain reduction and recovering methods of trussed arch model / **Kazutaka Sugiyama** (Nihon University College of Engineering)

Loading Protocols Employed in Evaluation of Seismic Behavior of Steel Beams in Weak-Beam Moment Frames / **Yu Jiao** (Tokyo Institute of Technology)

Effects of weld bead shape on crack tip stress field at initiation of brittle fracture during earthquakes / **Hiroshi Tamura** (Department of Engineering, Yokohama National University)

Young Researchers Session (Structural Engineering - Others)

(Cochairs : John van de Lindt & Hiroyasu Sakata) Main Hall

Earthquake-induced collapse prevention capacity of brick masonry structures confined with Tie Columns and Tie Beams / **Qixiang Tian** (Department of Architecture, University of Tokyo)

Reduced Expression for Timber Structure with Discretized Flexible Diaphragm and Seismic Response Evaluation Method / **Yoshihiro Yamazaki** (Tokyo Institute of Technology)

The Behaviour of Timber Framed Masonry Panels in Quasi-Static Cyclic Testing / **Andreea Duţu** (The National Research and Development Institute URBAN-INCERC)

Novel design methods for improved damage resistance of light-weight framed structures / **Scott Swensen** (Stanford University)

Analytical Study of Residual Seismic Performance of Existing Structures by Estimation of Equivalent Damping Ratio for Aftershocks / **Miguel Diaz Figueroa** (Yokohama National University)

Prediction of lateral strength of masonry walls / **Sanket Nayak** (Indian Institute of Technology Bhubaneswar)

Young Researchers Session (Advanced Technologies and Information, Computing Technology, Earthquake Engineering Practice and New Design Criteria and Methods)

(Cochairs: Ian Buckle & Akira Wada) W932

A combined displacement control device and design method / Fatih Sutcu (Istanbul Technical University)

Analytical and Experimental Studies of Structures with Building Mass Damper Systems / **Bo-Han Lee** (National Taiwan University)

Seismic Response of Coupled Long-Period Structures with Maxwell-Type Dampers Subjected to Long-Period Ground Motions / **Shintaro Kado** (University of Tsukuba)

The Seismic-isolation Design and Practice in the Soft Site of Shanghai / **Shuai Liu** (College of Civil Engineering of Tongji University)
The Effects of Superstructural Yielding on the Seismic Response of Base Isolated Structures / **Parisara Thiravechyan** (Tokyo Institute of Technology)

Test of Hybrid Floor Isolation System with Semi-active Control / **Yundong Shi** (Kyoto University)

Hysteretic Performance of Steel Shear Panel Confined by Polypropylene Plates and Carbon Fiber Sheets / **Huajia Zhu** (Graduate School of Engineering, Kobe University, Japan)

Vibration Control Method for a Building Structure-Equipment System to Reduce Both Structural and Functional Damages / **Nanako Miura** (Keio University)

Young Researchers Session (Advanced Technologies and Information, Computing Technology, Earthquake Engineering Practice and New Design Criteria and Methods) (Cochairs: Xilin Lu & Kazuhiko Kasai) W932

Multi-axial Active Isolation for Buildings against Earthquakes / **Chia-Ming Chang** (University of Illinois at Urbana-Champaign)

Experimental Study on Viscoelastic Dampers and Introduction to the Performance Evaluation Criterion in China / **Rui Li** (Tongji University)

Study on the Effect of Base Isolation in Masonry Structures / **Qiushi Fu** (School of Civil Engineering, Tongji University)

Efficiency of design ground motions synthesized in iterative modification utilizing multiple indices associated with nonlinear response of structures / **Tauqir Ahmed** (The University of Tokyo)

Influence of near-fault ground motions and seismic pounding on the response of base-isolated reinforced concrete buildings / **Deepak Pant** (Tokyo Institute of Technology)

Uncertainty in Modeling Seismic Response of Reinforced Concrete Bridge Columns / **Vesna Terzic** (University of California, Berkeley)

Large-scale 3-D seismic response analysis based on finite element analysis accelerated by high performance computing technique / **Sho Nonaka** (Earthquake Research Institute, the University of Tokyo)

Development of Remote System for Building Damage Assessment during Large Scale Earthquake Disaster / **Makoto Fujiu** (The University of Tokyo)

Integrating of Optimization and Data Mining Techniques for High-speed Train Timetable Design Considering Disturbances / **Ting-Wu Ho** (National Central University)

S3-3 Young Researchers Session (Engineering Seismology)

(Cochairs: Kuo-Liang Wen & Hitoshi Morikawa) W933

Site Specific Ground Motion Amplification Characteristics in Aobayama Hill, Sendai, Japan / **Tsoggerel Tsamba** (Graduate School of Engineering, Tohoku University)

A Study on Site Amplification for Observation Stations in the Iwate and Miyagi Regions, Japan / **Rami Ibrahim** (Earthquake Research Institute, Univ. of Tokyo)

Quantitative Analysis of the Degree of Nonlinear Site Response from the 1999 Chi-Chi, Taiwan Earthquake / **Yi-Wei Jeng** (Institute of Geophysics, National Central University, Taiwan)

Revised method for estimation of site amplification factor considering curvilinear relationship with average shear-wave velocity of ground / **Makoto Yamaguchi** (Non-Life Insurance Rating Organization of Japan)

The Characteristics of Ground Motions Excited by Active Source of TAIGER in the Chianan Plain / **Chun-Te Chen** (Institute of Geophysics, National Central University)

Observation and simulation of surface wave of Green's function using seismic interferometry in the Kanto basin, Japan / **Kosuke Chimoto** (Tokyo Institute of Technology)

The intensity anomalies caused by earthquakes within subduction zone in North-eastern Taiwan / **Mu-Ching Liu** (Institute of Geophysics, National Central University, Taiwan)

Mapping the Seismic Site Conditions in Metro Manila, Philippines based on Microtremor Measurements, Topographic Data and Geomorphology / **Rhommel Grutas** (Tokyo Institute of Technology)

Determination of 2D shallow S wave velocity profile using waveform inversion of P-SV refraction data / **Amrouche Mohamed** (Tokyo Institute of Technology)

Discrete Analytic Signal Wavelet Decomposition for phase localized in time-frequency domain for simulation of ground motions with stochastic property in phase spectrum / **Prem Khatri** (University of Tokyo)

A New Baseline Correction Method Developed from Empirical Mode Decomposition Process / **Jyun-Yan Huang** (Institute of Geophysics, National Central University, Taiwan)

Young Researchers Session (Engineering Seismology)

(Cochairs: Pierre-Yves Bard & Hiroaki Yamanaka) W933

Elastic and Post-Elastic Response of Structures to Hybrid Broadband Synthetic Ground Motions / **Carmine Galasso** (University of California, Irvine)

- 3-D Finite Difference Simulation of Long-period Ground Motions for the Performance Analysis of two Subsurface Velocity Models of the Kanto Basin using Moderate Magnitude Earthquakes / **Yadab Dhakal** (Tokyo Institute of Technology)
- A Modifying Method of Earthquake Ground Motion for Matching Multi-dimensional Nuclear Power Plants' Design Response Spectra and Related Peak Values / **Sheng Tao** (Tongji University)

Simulation of Near Fault Ground Motion of the Earthquake of November 25, 1759 with Magnitude of 7.4 Along Serghaya Fault, Damascus City, Syria / **Hussam Zaineh** (Tokyo Institute of Technology)

Boundary Element Approach and its Parallelization for Seismic Wave Propagation in Time-domain / **Akira Furukawa** (Tokyo Institute of Technology)

Surface Waves Generated due to a Subsurface Line Load in a Homogeneous Orthotropic Elastic Medium / **Priza Kayestha** (Tokyo Institute of Technology)

2-D Dynamic Rupture Simulation of Seismic Fault Using Convolution Quadrature Time-domain Traction Boundary Element Method / **Yang Shen** (Tokyo Institute of Technology)

Crustal movement detection for the 2011 Tohoku, Japan Earthquake from multi-temporal TerraSAR-X intensity images / **Wen Liu** (Department of Urban Environment Systems, Chiba University)

Characterization of SAR images in the 2010 Haiti earthquake / **Pralhad Uprety** (Chiba University)

S3-4 Young Researchers Session (Structural Engineering - Concrete, Bridge and Others) (Cochairs : Kiang Hwee Tan & Junichiro Niwa) W934

Hybrid Simulation of Seismic Response of Squat Reinforced Concrete Shear Walls / **Catherine Whyte** (University of California, Berkeley)

Experimental Research on Seismic Behavior of Post-retrofit Earthquake-damaged Frame Joint / **Chao ZHANG** (College of Civil Engineering in Tongji University)

WJ Application on Joining Surfaces of External Retrofitting Technique / **Onur Gedik** (Graduate School of Yokohama National University)

Shear resistance of reinforced concrete corbels for shear keys / **Zhe Qu** (Tokyo Institute of Technology)

Influence of Earthquake Strong-Motion Duration on the Behavior of Reinforced Concrete Frame Buildings / **Hetti Arachchige Don Buddika** (Tokyo Institute of Technology)

Strength and ductility of RC wall components with short lap splices / **Adane Gebreyohaness** (University of Auckland)

Assessment of Shear Contribution of the Short Fibers in Fiber-Reinforced Concrete Beams / **Pitcha Jongvivatsakul** (Tokyo Institute of Technology)

The experimental study on shear behavior of RC beams using U-shaped UFC permanent formwork / **Puvanai Wirojjanapirom** (Tokyo Institute of Technology)

A Proposal of New Predictive Equation for Diagonal Compressive Capacity of Reinforced Concrete Beams / **Patarapol Tantipidok** (Tokyo Institute of Technology)

Young Researchers Session (Structural Engineering - Concrete, Bridge and Others) (Cochairs : Julio Ramirez & Ken Watanabe) W934

Cyclic Response of Beam-Column Joints of RC Bridges Upon Partial Replacement of Steel Rebars with Steel Fibers / **Kabir Shakya** (Tokyo Institute of Technology, Japan)

Modeling of Compression Strut in Masonry Infill Panel for Seismic Performance Evaluation of Masonry Infilled RC Frame Structure / **Maidiawati Maidiawati** (Toyohashi University of Technology)

Seismic Performance of UFC Jacket Piers / **Rui Zhang** (Tokyo Institute of Technology)

Study on the Effectiveness of Seismic Retrofitting of URM Walls with High Performance Fiber Reinforced Cement Composites / **Gholamreza Zamani Ahari** (Kyushu University)

Analytical investigations of strength of beam-to-circular column connections of steel bridge frame piers with tapered flange plate / **Koji Kinoshita** (Gifu University, Department of Civil Engineering)

Preliminary Design of Seismically Isolated Bridges through a Specific Software / **Stergios Mitoulis** (Aristotle University of Thessaloniki, Greece)

Continued Functionality Performance for Base Isolated Structures Subjected to Earthquakes / **Sarun Chimamphant** (Tokyo Institute of Technology)

Experimental Research of Seismic Response Control of Building-Elevator System Using Linear Quadratic Gaussian Controller / **Keisuke Watanabe** (Graduate School Science and Technology, Keio University)

S3-5 Young Researchers Session (Geotechnical Engineering)

(Cochairs: Ross Boulanger & Ryosuke Uzuoka) W935

Potential Implications of Long Duration Ground Motions on the Response of Liquefiable Soil Deposits / **Samuel Sideras** (University of Washington)

Relationship between Seismic Characteristics and Soil Liquefaction of Urayasu city Induced by the 2011 Great East Japan

Earthquake / **Kota Katsumata** (Tokyo Institute of Technology)

Shear Stress Reduction due to Circular Reinforcement Columns in Liquefiable Soils / **Deepak Rayamajhi** (Oregon State University)

Is coarse backfill effective against floatation of underground structures? / **Siau Chen Chian** (Tokyo Institute of Technology)

Seismic Performance of Pile Foundations with Reinforcement of Steel Sheet-Piles / **Xiangjie Zhang** (Tokyo Institute of Technology)

Lateral loading tests of piled raft foundation in sand focused on moment resistance / **Kouhei Sawada** (Tokyo Institute of Technology)

Young Researchers Session (Geotechnical Engineering)

(Cochairs: Scott Ashford & Nozomu Yoshida) W935

Numerical Study of Three-Dimensional Dynamic Behavior of Soil-Pile-Structure System in Large Shaking Table Tests / **Youhao Zhou** (Tokyo Institute of Technology)

Seismic stability of gravity type quay wall on loose sand with desaturated process / **Ittichai Boonsiri** (Tokyo Institute of Technology)

Observed Changes on a Yield Surface due to Embedment of a Footing Subjected to Combined Loading / **Michael Cocjin** (Tokyo Institute of Technology)

Evaluation of Earth Pressure Acting on Non-yielding Retaining Wall During Earthquake / **Lin Ke** (Tokyo Institute of Technology)

Pseudo-static analysis of passive arch action in undercut slopes against earthquake / **Mohammad Hossein Khosravi** (Tokyo Institute of Technology)

Centrifuge Modeling on Uplift Behavior of Cut-and-cover Railway Tunnel Induced by Seismic Motion / **Yu-Chen Wei** (National Central University)

Ground Motion Estimation for Evaluation of Levee Performance in Past Earthquakes / **Dong Youp Kwak** (UCLA)

S3-6 Young Researchers Session (Tsunami) (Cochairs: Mikhail Nosov & Anil C. Wijeyewickrema) W936

Simulated relationships between parameters of a tsunami source and moment magnitude and depth of an earthquake / **Anna Bolshakova** (M.V.Lomonosov Moscow State University, Faculty of Physics)

Development of simulation framework of seismic response analysis and high resolution tsunami simulation / **Kohei Fujita** (University of Tokyo)

Regularized shallow water equations in numerical modeling of tsunami propagation and runup / **Oleg Bulatov** (Lomonosov Moscow State University, Faculty of Physics)

Inspection of Building Damage in Miyagi Prefecture, due to the 2011 Tohoku Earthquake Tsunami / **Hideomi Gokon** (Disaster Research Control Center, Tohoku University)

Analysis on the Tsunami Flow Velocity during the 2011 off the Pacific Coast of Tohoku Earthquake and Tsunami / **Piyawat Foytong** (Chulalongkorn University)

Experience from the 2004 Indian Ocean tsunami and damage and reconstruction from the 2011 Great East Japan tsunami / **Anawat Suppasri** (Disaster Control Research Center, Tohoku University)

Evaluation of tsunami fluid force acting on the bridge deck damaged by the 2011 off the Pacific Coast of Tohoku earthquake tsunami / **Yu Hiraki** (University of Tsukuba)

Direct boundary element method to irregular fluid-solid interfaces: Introduction and 3D numerical experiments / **Zheng-Hua Qian** (Tokyo Institute of Technology)

Young Researchers Session (Human Behavior and Socio-economic Issues)

(Cochairs: Haruyuki Fujii & Toshihiro Osaragi) W936

Examination of Vulnerability of Various Residential Areas in China for Earthquake Disaster Mitigation / **Xue Ma** (Tokyo Institute of Technology)

Social Interaction in the Outdoor Spaces of Relocated Donated Post Disaster Housing / Rachma Syam (Tokyo Institute of

Technology)

Development of large scale Multi Agent Simulation code for studying effective means of reducing pre-evacuation time / **Rithika Dulam** (University of Tokyo)

Structural Behavior of Residents Intention for Earthquake Safety Measures and Willingness to Pay / **Md. Shah** (University of Tsukuba)

An Agent Based Model for the Tsunami Evacuation Simulation. a case study of the 2011 Great East Japan Tsunami in Arahama town / **Erick Mas Samanez** (Tohoku University)

Parallel Session 4 14:00 - 16:00

Structural Engineering - Steel (Cochairs: Dabin Yang & Satoshi Yamada) Main Hall

Evaluation of Plastic Deformation Capacity of H-shaped Steel Beams with the Newly Limitation Value of Plate Slenderness / **Kikuo Ikarashi** (Tokyo Institute of Technology)

Dynamic Responses of Arch Structures with Plural TMDs / **Tomohiko Kumagai** (Tokyo Institute of Technology)

Outline of the Reconnaissance of Damaged Steel School Buildings due to the 2011 Tohoku Earthquake / **Satoshi Yamada** (Tokyo Tech.)

Response of single-layer cylindrical latticed shells subjected to severe earthquakes considering damage accumulation of steel / **Dabin Yang** (College of Civil Engineering, Shandong Jianzhu University)

Seismic Performance of Tubular Truss Tower Structures Taking Member Fracture into Account / **Ryota Matsui** (Tokyo Institute of Technology)

Strain-rate Effect on the Hysteretic behavior of Structural Steel / **Yuko Shimada** (Faculty of Engineering, Chiba Univ.)

S4-1 Non-Structural Components and Contents (Cochairs : E. Manos Maragakis & Shojiro Motoyui) W931

Ceiling Damage by the Great East Japan Earthquake and Its Restoration / **Shojiro Motoyui** (Tokyo Institute of Technology)
The damage of the building equipment under the 2011 Tohoku Pacific Earthquake / **Kunio Mizutani** (Tokyo Polytechnic University)

Seismic Response of Nonstructural Systems in NEES TIPS/NEES Nonstructural / NIED Collaborative Tests / **E.Manos Maragakis** (University of Nevada, Reno)**

Static loading tests of sprinkler piping for seismic retrofit and renovation of aged buildings / **Erika Shizu** (Kogakuin University)

Fundamental Study on Evaluation Method for Seismic Resistance of Free-access Floor / **Yutaka Yokoyama** (Tokyo Institute of Technology)

Seismic risk management of building equipment for business continuity planning / **Toyohiro Nishikawa** (Kogakuin University)

S4-2 New Design Criteria and Methods (Cochairs: Stephen Mahin & Akira Wada) W932

Using Performance-Based Earthquake Evaluation Methods to Assess the Relative Benefits of Different Structural Systems / **Stephen Mahin** (Pacific Earthquake Engineering Research Center)**

Identifying Cylindrical Guided Wave Modes for Damage Detection of Underground Pipes using Gabor Transform / **Rais Ahmad** (University of Connecticut)

Effect of bi-directional interaction on seismic behaviour of asymmetric structures / **Sekhar Dutta** (Indian Institute of Technology Bhubaneswar)

A Study of Seismic Isolation Codes Worldwide(Part I : Design Spectrum) / **Demin Feng** (Fujita Corp.)

A Study of Seismic Isolation Codes Worldwide(Part Ii : Design Procedure) / **Taiki Saito** (Building Research Institute)

Effect of Non-linear behaviour of Soil on Seismic Response of Soil-Pile Foundation-Structure System / **Rajib Saha** (National Institute of Technology Agartala)

S4-3 Engineering Seismology (Cochairs: Kuo-Liang Wen & Hitoshi Morikawa) W933

Strong ground motions observed by Small-Titan during the 2011 Great East Japan Earthquake / **Makoto Kamiyama** (Tohoku Institute of Technology)**

Long-period ground motion simulation of the 2011 off the Pacific coast of Tohoku Earthquake / **Hidenori Kawabe** (Kyoto University)**

Estimation of site amplification at the K-NET Tsukidate station with seismic intensity 7 during the 2011 off the pacific coast of Tohoku earthquake / **Hiroaki Yamanaka** (Tokyo Institute of Technology)

Variation of the equivalent hypocentral distances based on different fault models for the 2011 Tohoku earthquake / **Hongjun Si** (Earthquake Research Institute, University of Tokyo)

Earthquake motion of the 2011 off the Pacific coast of Tohoku Earthquake and the situation of issuing various earthquake alarms / **Yutaka Nakamura** (System and Data Research / Tokyo Institute of Technology)

Comparison of the P-wave earthquake alarm by multi-station and single-station detection systems / **Tsutomu Sato** (System and Data Research Co., Ltd.)

Real-time estimation of rupture zone by seismic intensity distribution / **Shunroku Yamamoto** (Railway Technical Research Institute)

Structural Engineering - Concrete (Cochairs : Yahya Kurama & Tetsuya Ohmura) W934

Collapse simulation of a super high-rise building subjected to extremely strong earthquakes / **Lieping Ye** (Department of Civil Engineering, Tsinghua University)

Seismic Performance Assessment of Gravity-Load-Designed Reinforced Concrete Buildings / **Pennung Warnitchai** (Asian Institute of Technology)

First Application of Buckling Restrained Brace System in Philippines in a 50-Story Building with Ductile Core Wall / **Naveed Anwar** (AIT Consulting, Asian Institute of technology)

Evaluating Seismic Performance of Existing School Building in Korea / **Dae-Han Jun** (Dongseo University)

Experimental Study on Shear Resistance of Concrete Connections between Existing RC Frames and Newly-added PCaPC Frames for Retrofit / **Hiroyasu Sakata** (Tokyo Institute of Technology)

Experimental Study on Stress Transfer Around Anchorages in R/C Corner Column and Beams Joints / **Koshiro Nishimura** (Hokkaido University)

Seismic response and strength ratio limit of concrete filled steel tube frame / **Katsuhiko Goto** (Miyakonojo National College of Technology)

S4-5 Geotechnical Engineering (Cochairs : Jonathan Stewart & Takaji Kokusho) W935

Aging Effect on Liquefaction Strength versus Cone Resistance of Sands Containing Fines by Triaxial Tests / **Takaji Kokusho** (Chuo University)

Overburden Correction Factors for Liquefaction Resistance / Ross Boulanger (University of California, Davis)

Regression Analysis for Equivalent Number of Stress Cycles in Soils and Attenuation Relationships of Kave, 15 / **Tadahiro Kishida** (Chiba University)

Simple two-dimensional formulation for liquefaction analysis / **Nozomu Yoshida** (Tohoku Gakuin University)

Seismic responses of a river levee on soft cohesive ground / **Ryosuke Uzuoka** (The University of Tokushima)

A Case Study on Polyhedron Model of a Strain Space Multiple Mechanism Model / **Ryo Ueda** (Kobori Research Complex Inc)

Numerical Investigation on Seismic Responses of a Liquefiable Sandy Soil Stratum with Multiple Silt Layers / **Huei-Tsyr Chen** (Department of Civil Engineering, National Central University)

S4-6 Human Behavior -15:45 (Cochairs : Christoph Aubrecht & Toshihiro Osaragi) W936

The Contribution of Multi-Level Geospatial Information to Assessing Urban Social Vulnerability to Earthquakes / **Christoph Aubrecht** (AIT Austrian Institute of Technology GmbH)

Transition of Housing Location in Villages in Iwate Prefecture after the Sanriku Tsunamis in 1896 and 1933 / **Osamu Murao**

(University of Tsukuba)

Microscopic Pedestrian Evacuation Simulation in Complex Geometries using Floor Field Cellular Automata / **James Chu** (National Central University, Taiwan)

Strategy for recovery of closed road network after earthquake damages / **Yasunori Muromachi** (Tokyo Institute of Technology) Individual Decision Making and Behavior of Returning Home in the Aftermath of a Devastating Earthquake / **Toshihiro Osaragi** (Tokyo Institute of Technology)

Parallel Session 5 16:00 - 17:30

Structural Engineering - Others (Cochairs : Hsieh-Lung Hsu & Yasushi Sanada) Main Hall

Innovative Retrofitting Method for Masonry Structures by Bamboo-band / **Kimiro Meguro** (The University of Tokyo)

Column-to-Foundation Connections : Post Installation for an Advanced Retrofitting Solution / **Christoph Mahrenholtz** (University of Stuttgart, IWB)

Behaviour of Colliding Buildings to Earthquake Excitation Considering Soil-Structure Interaction / **Sayed Mahmoud** (Faculty of Engineering at Rabigh, King Abdulaziz University)

Evaluation of Strength Reduction Factors to Estimate Inelastic Demand Spectra for Elasto-Plastic System / **Sung Gook Cho** (JACE KOREA R&D Center)

Three Point Bending Test and Finite Element Analysis on FRP Bridge Deck / **Yeou-Fong Li** (National Taioei University of Technology)

S5-1 Earthquake Loss Estimation (Cochairs: Vinci Nicholas Villasenor & Hideki Kaji) W931

Loss Estimation on Lima City using a Retrofitting Cost Estimation Tool / **Carlos Zavala** (Universidad Nacional de Ingenieria)
Insurance-Based Seismic Loss Modeling for Indiaand Pakistan / **Mohammad Zolfaghari** (KN Toosi University of Technology)

A Simple Technique to Account for Building Vintage in Analytically Deriving Seismic Fragility Curves of Archetype Reinforced Concrete Building Frame Models / **Marie Claire Pascua** (Institute of Civil Engineering, Univ. of the Philippines)

S5-2 Blind Analysis Contest (Cochairs : Troy Morgan & Kazuhiko Kasai) W932

Predicting nonlinear response of an RC bridge pier subject to shake table motions / **Zhe Qu** (Tokyo Institute of Technology)
Observations from NEES/E-Defense Tests of a Full Scale Isolated and Fixed-Base Building / **Keri Ryan** (University of Nevada, Reno)
Modeling and Experimental Validation of a Full Scale 5-Story Steel Building Equipped with Triple Friction Pendulum Bearings:
E-Defense Blind Analysis Competition / **Dimitrios Lignos** (McGill University)

Blind Analyses of a Full-Scale 5-Story Steel Building with the Fixed-Base Configuration / **Yi-Jer Yu** (National Center for Research on Earthquake Engineering)

Structural Engineering - Concrete (Cochairs : Stephen Mahin & Lieping Ye) W934

Hybrid Precast Concrete Shear Walls for Seismic Regions : Solid and Perforated Walls / **Yahya Kurama** (University of Notre Dame)**

Behavior of belled pile reinforced with high-strength steel bars under cyclic flexure and constant axial load / **Yo Hibino** (Tokyo Institute of Technology)

Analytical Study on Beam Depth Reduction Effect of SRC Coupling Beam Considering Slab Stiffness / **Hak Bo Shim** (lotte engineering & constuction)

Seismic rehabilitation of a 23-story RC building in Mexico City / **Jorge Avila** (Institute of Engineering, National University of Mexico(UNAM))

Seismic Performance of Existing RC Flat-Plate Structures / **Ajoy Paul** (Chittagong University of Engineering & Technology, CUET)

S5-5 Geotechnical Engineering (Cochairs: Youssef Hashash & Masaki Kitazume) W935

Laboratory testing on stabilized soil for ground reinforcement / **Masaki Kitazume** (Tokyo Institute of Technology)

Introduction of structural anisotropy for seismic resistant geotechnical structure / **Tetsuo Tobita** (Disaster Prevention Research Institute, Kyoto University)

Influence of Design Parameter Variations on the Performance of Geogrid-Reinforced Unpaved Roadway / **Wen-Chao Huang** (National Central University)

Could deep soil densification impact the seismic site effect ? / **Stephane Brule** (MENARD)

SPH formulation for simulating soil behavior by using finite deformation theory / **Tomohide Takeyama** (Tokyo Institute of Technology)

A review on seismic wave propagation and liquefaction resistance in saturated sand / **Abdoullah Namdar** (Universiti Malaysia Pahang)

S5-6 Human Behavior 15:45- (Cochairs : Sanjoy Mazumdar & Ryuzo Ohno) W936

A Cultural Ecological Approach to Disaster Planning / **Sanjoy Mazumdar** (Department of Planning, Policy, and Design)
Survival of the Care Facility for the Elderly for Protecting a User's Life and Maintaining a Life / **Satoshi Ishii** (Tohoku Institue of Technology)

Patterns of Action and Decision Making in Recovering and Rebuilding Processes from an Earthquake Disaster / **Haruyuki Fujii** (Tokyo Institute of Technology)

A Study on the Consciousness and the Activities of Residents Living on an Active Fault During Earthquake Evacuation / **Katsutoshi Kato** (Higashi Mikawa Regional Research Center)

How Do Coastal Residents Behave after a Big Earthquake? : A Questionnaire Survey after the Great East Japan Earthquake at Onjuku, Chiba prefecture / **Ryuzo Ohno** (Tokyo Institute of Technology)

Banquet (Chair: Toru Takeuchi) Shinagawa Prince Hotel 18:15 - 20:00

Thursday, March 8th

Parallel Session 6 9:00 - 12:15

Structural Engineering - Bridge (Cochairs : Ian Buckle & Chitoshi Miki) W932

Seismic Response of a Curved Bridge with Full and Hybrid Protective Systems / **Ian Buckle** (University of Nevada Reno)**
Seismic Upgrading of Steel Trusses using BRBs / **Tsutomu Usami** (Meijo University)**

Numerical Simulation of Collapse of Bridges Suffering from Fault Dislocation / **Tzu-Ying Lee** (National Central University)

Performance of Typical California Overpass Bridge Structures under Tsunami Wave Loading / **Bozidar Stojadinovic** (Swiss Federal Institute of Technology (ETH) Zürich)

Structural Engineering - Bridge (Cochairs: David Lau & Bozidar Stojadinovic) W932

Non linear dynamic analysis of bridge to spatially variable multiple support excitations / **Zendagui Djawad** (Department of Civil Engineering, University Tlemcen)

Development of a Mobile Bridge Health Monitoring System / **Tzu Kan Lin** (national center for research on earthquake engineering)

Evaluation of Major Bridges in Cagayan Valley, Philippines / **Susan Vallejo** (ISABEL STATE UNIVERSITY)

S6-3 Response Records (Cochairs: Moh-Jiann Huang & Kazuhiko Kasai) W933

Response-Only Identification of Torsionally Coupled Buildings using Strong Motion Data / **Ertugrul Taciroglu** (University of California, Los Angeles)**

Measured period of vibration of high-rise buildings recorded on video movies opened to the public excited by the 2011 off

the Pacific coast of Tohoku Earthquake / **Yutaka Nakamura** (System and Data Research / Tokyo Institute of Technology)

Dynamic behavior of buildings on the campus of Tohoku Institute of Technology / **Naoki Funaki** (Tohoku Institute of Technology)

Study on Performance of Semi-active Base-isolation System Using Earthquake Observation Records / **Ichiro Nagashima** (Technology Center, Taisei Corporation)

Seismic Response and Damage of High-Rise Buildings in Tokyo, Japan, during the 2011 Great East Japan Earthquake / **Yoshiaki Hisada** (Kogakuin University)

Response Records (Cochairs: Carlos Ventura & Yoshiaki Hisada) W933

Effects of Seismically Isolated Buildings During the 2011 Earthquake off the Pacific Coast of Tohoku / **Masaaki Saruta** (Shimizu Corporation)

Earthquake response analyses of a levee and a viaduct using strong motion records obtained during the 2011 off the Pacific coast of Tohoku earthquake / **Shojiro Kataoka** (National Institute for Land and Infrastructure Management)

Performance of Seismic Retrofitting of Super High-Rise Building Based on Earthquake Observation Records / **Ryota Maseki** (TAISEI Corporation)

Earthquake Motion Observation Records at a High-rise Base Isolated Building during the 2011 off the Pacific Coast of Tohoku Earthquake / **Shigeki Sakai** (Technical Research Institute, Hazama Corporation)

Strong Motion Data in Buildings from the 2011 Great East Japan Earthquake / **Toshihide Kashima** (Building Research Institute)**

Structural Engineering - Concrete (Cochairs: Pennung Warnitchai & Koshiro Nishimura) W934

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