

14th U.S.-Japan Workshop on Improvement of Structural Design and Construction Practices
Makena Beach & Golf Resort, 5400 Makena Alanui, Wailea-Makena (Maui) Hawaii
December 3-5, 2012

Final Program

Sunday, December 2, 2012

6:00 pm – 8:00 pm: **Welcome Ice Breaker, Molokini Lounge**

Monday, December 3, 2012

8:00 am – 8:45 am: *Registration, Coffee/Tea*

8:45 am – 9:00 am: *Welcome and Opening Remarks, C. Rojahn and K. Miyamoto (U.S.), M. Kawamura (Japan)*

**Session 1: East Japan Earthquake of 2011 and Its Implications
in Planning and Tsunami Engineering
Chairpersons: M. Takayama (Japan); J. Rossberg (U.S.)**

9:00 am – 9:45 am: **Part A: Impacts of the Tohoku Earthquake and Tsunami of March 11, 2011**

Brief presentations by topic speakers (3 presentations @ 15 minutes);

Brief Review of Building Damage by the 2011 Tohoku Japan Earthquake and Following Coping Activities; I. Nishiyama*, Izuru Okawa¹, Hiroshi Fukuyama¹, and Yasuo Okuda

Structural Analysis Case Studies of Buildings Damaged During the Tohoku Tsunami; L. Carden*, G. Chock, I. Robertson, and G. Yu

Categorization of Damage to Buildings Caused by the March 2011 Tsunami; H. Fukuyama*, Y. Okuda, H. Kato, T. Ishihara, S. Tajiri, T. Kabeyasawa, and M. Tani

9:45 am – 10:30 am: **Part B: Existing and Proposed Tsunami Design Guidelines and Codes, and Their Application**

Brief presentations by topic speakers (3 presentations @ 15 minutes);

Current Tsunami Design Guidance in the United States – FEMA P-646; I. N. Robertson*

Structural Design Requirement on the Tsunami Evacuation Buildings; H. Fukuyama*, Y. Okuda, H. Kato, T. Ishihara, S. Tajiri, T. Kabeyasawa, and Y. Nakano

ASCE 7 and the Development of a Tsunami Building Code for the U.S.; G. Chock *

10:30 am – 10:45 am: *Break*

10:45 am – 11:30 am: **Part C: Performance of Tall Buildings and Base-Isolated Structures During the Tohoku Earthquake**

*Presenting author

Brief presentations by topic speakers (3 presentations @ 15 minutes);
Performance of Base-Isolated Buildings under the 2011 East Japan Earthquake; Y. Fukusawa*

Drift Issues of Tall Buildings During the March 11, 2011 M9.0 Tohoku Earthquake, Japan - Implications; M. Celebi*

Performance of Seismically Isolated Buildings due to 2011 Tohoku Earthquake; M. Takayama*

11:30 am – 11:45 am: *Questions/Discussion*

11:45 am – 1:15 pm: **Lunch and Group Photo**

1:15 pm – 2:15 pm: *Breakout Sessions to address Session 1 topic issues and develop workshop findings*

2:15 pm – 2:45 pm: *Plenary Session to Report on Session 1 Breakout Session findings*

2:45 pm – 3:00 pm: *Announcements, Day 1 Closure*

6:00 pm: **Evening Party and Dinner**

Tuesday, December 4, 2012

7:45 am – 8:00 am: *Coffee/Tea*

Session 2: Earthquake Response, Recovery and Reconstruction
Chairpersons: R. Sharpe (U.S.), T. Fukuda (Japan)

8:00 am – 8:45 am: **Part A: Seismic Response of Buildings, Bridges, Ports and Other Structures**

Brief presentations by topic speakers (3 presentations @ 15 minutes);

Countermeasures for Long-Period Ground Motions; T. Fukuda*, N. Koshika, and H. Kitamura

Dynamic Instability in High-Rise Steel Structures Subjected to Strong Ground Motions: A Review; K. Ikago*

Simulated Earthquake Ground Motion for Structural Design; S. Nagase*

8:45 am – 9:30 am: **Part B: Postearthquake Safety Evaluation of Buildings**

Brief presentations by topic speakers (3 presentations @ 15 minutes);

The 2010-2011 Canterbury New Zealand Earthquakes and the Emergency Management of Buildings and Infrastructure; P. R. Wood*, D. Brunson, J. Hare, M. Stannard, B. Galloway

The Effectiveness of Post-Earthquake Building Safety Evaluations Carried out in the Canterbury Earthquake Sequence and Proposals for Future Development; B. Galloway*, D. Brunson, J. Hare, M. Stannard, and P. Wood

*Presenting author

Lessons from the Postearthquake Safety Evaluation in the 2010-2011 Canterbury, New Zealand Earthquakes and Implications for Updating ATC-20; B. Lizundia* and R. Gallagher

- 9:30 am – 10:30 am: **Part C: Recovery/Reconstruction and Community Resilience**
Brief presentations by topic speakers (4 presentations @ 15 minutes);
Seismic Evaluation and Retrofit of Old Buildings Located Along the Specific Emergency Transportation Roads in Tokyo; T. Okoshi*
Recovery Cooperation for Padang Earthquake Damage by Seismic Isolation Buildings Design; T. Teramoto*
Break (15 minutes)
Some Examples of Plan and Activity in Re-Construction from the 2011 Great East Japan Earthquake; M. Kawamura*
Building Seismically Resilient Communities by Effective Seismic Risk Reduction and Disaster Reconstruction Programs; H. K. Miyamoto* and Amir S.J. Gilani
- 10:30 am – 10:45 am: *Questions/Discussion*
- 10:45 am – 11:45 am: *Breakout Sessions to address Session 2 topic issues and develop workshop findings*
- 11:45 am – 12:15 pm: *Plenary Session to Report on Session 2 Breakout Session findings*
- 12:15 pm – 1:15 pm: ***Bento Box Lunch & Special Presentation: 52-Year Application of Seismic Provisions to Major Research Facilities;*** R. Sharpe

Session 3: Risk Management and Loss Estimation Chairpersons: Y. Shinozaki (Japan), J. Heintz (U.S.)

- 1:15 pm – 2:00 pm: **Part A: Current and Developing Models for Earthquake Damage and Loss Estimation**
Brief presentations by topic speakers (3 presentations @ 15 minutes);
Transparent Global Earthquake Risk and Loss Estimation; N. Keller* and H. K. Miyamoto
Performance of Buildings under the Coming Mid-size Earthquake Beneath Tokyo Metropolitan Area; Y. Shinozaki*
Risk Management and Loss Estimation Lessons from the Real World; P. Yanev* and A. Yanev
- 2:00 pm – 2:30 pm: **Part B: Reliability and Risk Analysis of Structural and Nonstructural Systems**
Brief presentations by topic speakers (2 presentations @ 15 minutes);
San Francisco's Community Action Plan for Seismic Safety; C. Rojahn*, L. Kornfield, L. Tobin, and L. Samant

*Presenting author

Seismic Actions of Nonstructural Components; H. Ito*

- 2:30 pm – 2:45 pm: *Questions/Discussion*
- 2:45 pm – 3:00 pm: **Break**
- 3:00 pm – 4:00 pm: *Breakout Sessions to address Session 3 topic issues and develop workshop findings*
- 4:00 pm – 4:30 pm: *Plenary Session to Report on Session 3 Breakout Session findings*
- 4:30 pm: *Announcements, Day 2 Closure*
- 7:00 pm: **Evening Party and Dinner**

Wednesday, December 5, 2012

- 8:15 am – 8:30 am: *Coffee/Tea*

**Session 4: New Horizons in Performance Based Engineering
Chairpersons: B. Lizundia (U.S.), H. Sakata (Japan)**

- 8:30 am – 9:00 am: **Part A: New Developments in Performance-Based Engineering**
Brief presentations by topic speakers (2 presentations @ 15 minutes.);
The Horizon for Next-Generation Performance Assessment of Buildings is Here: FEMA P-58; J. Heintz*
Use of Performance Based Engineering Criteria in Motivating Residential Seismic Retrofit; K. Cobeen
- 9:00 am – 9:30 am: **Part B: Design and Response of Buildings With Seismic Protection Systems**
Brief presentations by topic speakers (2 presentations @ 15 minutes.);
Seismic Dampers: How High Performance Devices Change the World; H. K. Miyamoto and A. M. Gilani
Performance Evaluation of a Building Structure with Nonlinear Dampers under Strong Ground Motion on March 11, 2011; I. Nishimura*
- 9:30 am – 10:00 am: **Part C: Retrofit of Buildings with Seismic Protection Systems**
Brief presentations by topic speakers (2 presentations @ 15 minutes);
Seismic Retrofit of Ductile Concrete Moment-Resisting Frames With Innovative Pin-Supported Wall System; H. Sakata, Z. Qu, S. Midorikawa, and A. Wada
Seismic Retrofit of the Tower Structure with Viscous Dampers; N. Kurauchi*
- 10:00 am – 10:15 am: *Questions/Discussion*
- 10:15 am – 10:30 am: **Break**

*Presenting author

- 10:30 am – 11:30 am: *Breakout Sessions to address Session 4 topic issues and develop workshop findings*
- 11:30 am – Noon *Plenary session to report on Session 4 Breakout Session findings*
- Noon – 1:30 pm: ***Lunch***

Session 5: Closing Session

Chairpersons: M. Kawamura (Japan), K. Miyamoto and C. Rojahn (U.S.)

- 1:30 pm – 2:15 pm: *Special Presentation (30 minutes) and Group Discussion;*
Mission, Goals and Social Responsibility of Structural Engineers;
A. Wada*
- 2:15 pm – 2:45 pm: *Workshop Summary and Wrap-Up*
- 2:45 pm – 3:00 pm: *Closing Comments, Workshop Closure*
- 6:00 pm: **Luau (separately paid and ticketed function)**

*Presenting author