

DISASTER RESILIENCE PUBLICATIONS BY MCEER RESEARCHERS

Bruneau, M., *Invited Speaker*, **Enhancing the Resilience of Communities against Extreme Events from an Earthquake Engineering Perspective**, Proceedings of the ASCE Metropolitan Section Infrastructure Group Seminar – Infrastructure Safety & Security 2006, New York, March 2006.

Bruneau, M., **Enhancing the Resilience of Communities against Extreme Events from an Earthquake Engineering Perspective**, IABSE Symposium on Structures and Extreme Events, Lisbon, Portugal, September 2005, CD-ROM.

Bruneau, M., *Invited Speaker*, **Seismic Risk - Why it should be Considered and Impediments to Implementation - An Earthquake Center Perspective**, ASCE 2005 Structures Congress, New York, April 2005.

Bruneau, M. and Reinhorn, A., **Overview of the Resilience Concept**, 8th National Seismic Conference, San Francisco, April 2006, Paper No. 2040.

Bruneau, M. and Reinhorn, A., *Invited Speaker*, **Seismic Resilience of Communities - Conceptualization and Operationalization**, Workshop on Seismic Design Methodologies for the Next Generation of Codes, Bled, Slovenia, July 2004 (proceedings in press).

Bruneau, M., Chang, S.E., Eguchi, R.T., Lee, G.C., O'Rourke, T.D., Reinhorn, A.M., Shinozuka, M., Tierney, K., Wallace, W.A. and von Winterfeldt, D., **A Framework to Quantitatively Assess and Enhance the Seismic Resilience of Communities**, Earthquake Spectra, Vol.19, No.4, pp.733-752, November 2003.

Bruneau, M., Chang, S.E., Eguchi, R.T., Lee, G.C., O'Rourke, T.D., Reinhorn, A.M., Shinozuka, M., Tierney, K., Wallace, W.A. and von Winterfeldt, D., **A Framework to Quantitatively Assess and Enhance the Seismic Resilience of Communities**, 13th World Conference on Earthquake Engineering, Vancouver, Canada, August 2004, Paper No. 2575.

Bruneau, M., Filiatrault, A., Lee, G.C., O'Rourke, T.D., Reinhorn, A.M., Shinozuka, M. and Tierney, K., **White Paper on the SDR Grand Challenges for Disaster Reduction**, MCEER-05-SP09, December 2005.

Chang, S.E. and Miles, S.B., **Resilient Community Recovery: Improving Recovery Through Comprehensive Modeling**, MCEER Research Progress and Accomplishments: 2001-2003, MCEER-03-SP01, May 2003, pp.139-148.

Cimellaro, G.P., Reinhorn, A. and Bruneau, M., **Quantification of Seismic Resilience**, 8th National Seismic Conference, San Francisco, April 2006, Paper No. 1094.

Hall, J., **Improving the Resilience of the Nation's Critical Infrastructure**, The Infrastructure Security Partnership (TISP), Issue 39, March 2006.

Rose, A., **Defining and Measuring Economic Resilience to Disasters**, Disaster Prevention and Management, Vol. 13, No. 4, 2004, pp. 307-14.

Rose, A., **Defining and Measuring Economic Resilience to Earthquakes**, MCEER Research Progress and Accomplishments: 2003-2004, MCEER-04-SP01, May 2004.

Rose, A. and Liao, S., European Union, **Understanding Sources of Resiliency to Natural Hazards**, in A. van der Veen et al. (eds.) Proceedings of the Joint NEDEIS and University of Twente Workshop: In Search of a Common Methodology for Damage Estimation, Bruxelles: Office for Official Publications of the European Communities, 2003, pp. 137-50.

Rose A., and Lim, D., **Business Interruption Losses from Natural Hazards: Conceptual and Methodological Issues in the Case of the Northridge Earthquake**, Environmental Hazards: Human and Policy Dimensions, Vol. 4, No. 2, 2002, pp. 1-14.

Thrust Area 1 – Seismic Evaluation and Retrofit of Lifeline Systems

Çagnan, Z., and Davidson, R., **Discrete Event Simulation of the Post-earthquake Restoration Process for Electric Power Systems**, International Journal of Risk Assessment and Management, (in press).

Çagnan, Z., Davidson, R., and Guikema, S. **Post-earthquake Restoration Planning for Los Angeles Electric Power**, Earthquake Spectra, Vol. 22, No. 3, 2006, pp. 1-20.

Chang, S.E. and Chamberlin, C., **Assessing the Role of Lifeline Systems in Community Disaster Resilience**, MCEER Research Progress and Accomplishments: 2003-2004, MCEER-04-SP01, May 2004, pp.87-94.

Chang, S.E. and Coelho, S., **Performance Objectives for Seismic Mitigation of Utility Lifelines**, 8th National Conference on Earthquake Engineering, San Francisco, 2006.

Chang, S.E. and Shinozuka, M., **Measuring Improvements in the Disaster Resilience of Communities**, Earthquake Spectra, Vol.20, No.3, 2004, pp.739-755.

Chang, S.E., McDaniels, T.L. Longstaff, H. and Wilmot, S., **Fostering Disaster Resilience through Addressing Infrastructure Interdependencies**, Plan Canada (accepted).

Davidson, R. and Çagnan, Z., **Restoration Modeling of Lifeline Systems**, MCEER Research Progress and Accomplishments: 2003-2004, MCEER-04-SP01, May 2004.

Guikema, S., Xu, N. Davidson, R., Nozick, L., and Çagnan, Z. **Optimization of Crews in Post-earthquake Electric Power Restoration**. Proceedings, 8th U.S. National Conference on Earthquake Engineering, San Francisco, CA, April 18-22, 2006.

O'Rourke, T.D., Lembo, A.J. Nozick, L.K. and Bonneau, A.L., **Resilient Infrastructure: Lessons from the WTC, Crisis Response**, Vol. 1, Issue 4, Sept., 2005, pp. 40-42.

O'Rourke, T.D., Wang, Y. and Shi, P., **Advances in Lifeline Earthquake Engineering**, Keynote Paper, Proceedings, 13th World Conference on Earthquake Engineering, Vancouver, B.C., Canada, August 1-6, 2004, Paper No. 5003.

Rose A. and Liao, S., **Modeling Regional Economic Resilience to Disasters: A Computable General Equilibrium Analysis of Water Service Disruptions**, Journal of Regional Science, Vol. 45, No. 1, 2005, pp. 75-112.

Rose, A. and Liao, S., **Understanding Sources of Economic Resiliency to Hazards: Modeling the Behavior of Lifeline Service Customers**, MCEER Research Progress and Accomplishments: 2001-2003, MCEER-03-SP01, May 2003.

Rose, A., Oladosu, G. and Liao, S., **Business Interruption Impacts of a Terrorist Attack on the Electric Power System of Los Angeles: Customer Resilience to a Total Blackout**, Risk Analysis, forthcoming.

Scawthorn, C., O'Rourke, T.D., Blackburn, F., **The San Francisco Earthquake and Fire of 1906-Enduring Lessons for Fire Protection and Water Safety**, Earthquake Spectra, Apr. 2006, Special 1906 San Francisco Earthquake Volume.

Shi, P., O'Rourke, T.D. and Wang, Y., **Simulation of Earthquake Water Supply Performance**, Proceedings, 8th National Conference on Earthquake Engineering, San Francisco, California, 2006.

Shinozuka, M. and Chang, S.E., **Evaluating the Disaster Resilience of Power Networks and Grids**, Chapter 14 in Y. Okuyama and S.E. Chang, eds., Modeling Spatial Economic Impacts of Disasters, Berlin: Springer-Verlag, 2004, pp.289-310.

Shinozuka, M., Chang, S.E., Cheng, T-C., Feng, M., O'Rourke, T.D., Saadeghvaziri, M.A., Dong, X., Jin, X., Wang, Y. and Shi, P., **Resilience of Integrated Power and Water Systems**, MCEER Research Progress and Accomplishments: 2003-2004, MCEER-04-SP01, May 2004 pp.65-86.

Xu, N., Guikema, S., Davidson, R., Nozick, L., Çagnan, Z., and Vaziri, K. **Optimizing Scheduling of Post-earthquake Electric Power Restoration Tasks**, Earthquake Engineering and Structural Dynamics, Special Issue: Electric Power, in press.

DISASTER RESILIENCE PUBLICATIONS (CONT'D.)

Thrust Area 2—Seismic Retrofit of Acute Care Facilities

Alesch, D.J., Dargush, G.F., Grigoriu, M., Petak, W.J. and vonWinterfeldt, D., **Decision Models: Approaches for Achieving Seismic Resilience**, MCEER Research Progress and Accomplishments: 2001-2003, MCEER-03-SP01, May 2003.

Bruneau M. and Reinhorn, A., **Exploring the Concept of Seismic Resilience for Acute Care Facilities**, First European Conference on Earthquake Engineering and Seismology, Geneva, Switzerland, September 2006.

Bruneau, M. and Reinhorn, A., **Operationalizing the Concept of Seismic Resilience for Acute Care Facilities**, Earthquake Spectra, (accepted for publication June 2006, in press).

Cimellaro, G.P., Reinhorn, A., and Bruneau, M., **Seismic Resilience of a Health Care Facility**, Workshop of the Asian-Pacific Network of Center in Earthquake Engineering Research, Jeju, Korea, November 2005.

Cimellaro, G.P., Reinhorn, A.M., Bruneau, M. and Rutenberg, A., **Multi-Dimensional Fragility of Structures: Formulations and Evaluation**, Technical Report MCEER-06-0002, March 2006.

Filiatrault, A., Bruneau, M., Alesch, D., Constantinou, M., Dargush, D., Grigoriu, M., Lee, G., Maragakis, E., Mosqueda, G., Petak, W., Reinhorn, A., and von Winterfeldt, D., **Enhancing the Resilience of Acute Care Facilities: An Overview of MCEER Research**, 8th National Seismic Conference, San Francisco, April 2006, Paper No. 2034.

Petak, W.J., **Technology-Aided Situation Awareness: A Key to Organizational and Community Resilience in Disaster Management**, Sixth DPRI-IIASA Forum on Integrated Disaster Risk Management, Istanbul, Turkey, August 2006.

Thrust Area 3—Emergency Response and Recovery

Chang, S.E., **Modeling How Cities Recover from Disasters**, Proceedings of the 1st International Conference on Urban Disaster Reduction, Kobe, Japan, 2005.

Chang, S.E. and S.B. Miles, **The Dynamics of Recovery: A Framework**, Chapter 10 in Y. Okuyama and S.E. Chang, eds., *Modeling Spatial Economic Impacts of Natural Disasters*, Berlin: Springer-Verlag, 2004, pp.181-204.

Eguchi, R.T., Huyck, C.K., Adams, B.J., Mansouri, B., Houshmand, B. and Shinozuka, M., **Resilient Disaster Response: Using Remote Sensing Technologies for Post-Earthquake Damage Detection**, MCEER Research Progress and Accomplishments: 2001-2003, MCEER-03-SP01, May 2003

Miles, S.B. and Chang, S.E., **Modeling Community Recovery from Earthquakes**, Earthquake Spectra, Vol. 22, No. 2, 2006, pp. 439-458.

Miles, S.B. and Chang, S.E., **Foundations for Modeling Community Recovery from Earthquake Disasters**, " Proceedings of the 13th World Conference on Earthquake Engineering, Vancouver, Canada, 2004, Paper No. 567.

Miles, S.B. and Chang, S.E., **Urban Disaster Recovery: A Framework and Simulation Model**, Technical Report MCEER-03-0005, 2003, MCEER, University at Buffalo.

Tierney, K. and Trainor, J., **Networks and Resilience in the World Trade Center Disaster**, MCEER Research Progress and Accomplishments: 2003-2004, MCEER-04-SP01, May 2004



MCEER, University at Buffalo, Red Jacket Quadrangle, Buffalo, NY 14261

Tel: 716.645.3391 ■ Fax: 716.645.3399 ■ Email: mceer@buffalo.edu ■ WWW: <http://mceer.buffalo.edu>