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Research Progress and Accomplishments: 1997-1999

Research Progress and Accomplishments highlights selected MCEER research efforts and provides those in the earthquake engineering community with a glimpse of the foci and direction of MCEER's programs. This work presents twelve different research projects. Some describe efforts that have been completed and are now represented in codes, standards and regional or national guidelines, while others describe work in progress.

Each paper, whether it be on developing loss estimation techniques, construction of a benchmark model for repetitive testing, or the vulnerability analysis of the Los Angeles Department of Water and Power's vast network, provides a snapshot of how MCEER accomplishes its multidisciplinary and team-oriented research. The authors identify the sponsors of the research, collaborative partners, related research tasks within MCEER's various programs, and links to research and implementation efforts outside MCEER's program. Papers are:



- A New Application for Remotely Sensed Data: Construction of Building Inventories Using Synthetic Aperture Radar Technology by *R. Eguchi, B. Houshmand, C. Huyck, M. Shinozuka and D. Tralli*
- Improving Earthquake Loss Estimation: Review, Assessment and Extension of Loss Estimation Methodologies by *K. Tierney, S. Chang, R. Eguchi, A. Rose and M. Shinozuka*
- Benchmark Models for Experimental Calibration of Seismic Fragility of Buildings by *A. Reinhorn, M. Constantinou and D. Kusumastuti*
- Development of a Semi-Active Structural Control System by *G. Lee, Z. Liang and M. Tong*
- GIS Characterization of the Los Angeles Water Supply, Earthquake Effects and Pipeline Damage by *T. O'Rourke, S. Toprak and S-S. Jeon*
- Axial Behavior Characteristics of Pipe Joints Under Static Loading by *E. Maragakis, R. Siddharthan and R. Meis*
- Seismic Performance Analysis of Electric Power Systems by *M. Shinozuka and S-T. Mau*
- National Representation of Seismic Hazard and Ground Motion for Highway Facilities by *M. Power, S-J. Chiou and R. Mayes*
- Updating Assessment Procedures and Developing a Screening Guide for Liquefaction by *T. Youd*
- Fragility Curve Development for Assessing the Seismic Vulnerability of Highway Bridges by *J. Mander*
- Changes in the New AASHTO Guide Specifications for Seismic Isolation Design by *M. Constantinou*
- Seismic Retrofitting Manuals for Highway Systems by *I. Friedland and I. Buckle*

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