

Curriculum Vitae

September 2013



Sanaz Rezaeian, Ph.D.

Research Structural Engineer, USGS, Golden, CO

E-mail: sanazr128@yahoo.com ; srezaeian@usgs.gov

Address: 3738 Zuni St., Denver, CO 80211

URL: <https://profile.usgs.gov/srezaeian>

Phone: (303) 478-3275

EDUCATION

UNIVERSITY OF CALIFORNIA, BERKELEY

Ph.D. Structural Engineering, Mechanics and Materials, May 2010

Minors: Statistics & Earthquake Engineering

Advisor: Prof. Armen Der Kiureghian

Dissertation: Stochastic simulation of ground motions for performance-based earthquake engineering

M.Sc. Structural Engineering, Mechanics and Materials, 2006

Advisors: Prof. A. Der Kiureghian and Prof. S.A. Mahin

Thesis: A stochastic nonstationary model of earthquake ground motion

B.Sc. Civil and Environmental Engineering, 2004

Graduated with High Honors

AREAS OF SPECIALIZATION

Structural Engineering with an emphasis on Earthquake Engineering

Characterization and modeling of earthquake ground motions

Ground motion simulation validation

Identification of earthquake ground motions for the design of structural systems

Probabilistic seismic hazard analysis and risk assessment

Performance-based design of structures

Applications of statistics, probability, and random vibrations theory in engineering

SELECTED FELLOWSHIPS / HONORS / AWARDS

Mendenhall Post-Doctoral Fellowship, March 2011-2013

Two-year project on seismic hazard analysis

PEER (Pacific Earthquake Engineering Research) Transportation Research funding, 2009-2010

Awarded financial support for research on simulation of ground motions

Chancellor's Fellowship for Graduate Study, UC Berkeley, 2005-2009

Four years of financial support for doctoral program. Award is based on a highly competitive selection process.

Outstanding Graduate Student Instructor Award, UC Berkeley, Fall 2008

Popert Fellowship, UC Berkeley (Awarded by the Department of Civil and Environmental Engineering), Fall 2008

Privately-Funded William T. & Helen S. Halstead Scholarship, 2007-2008

PEER (Pacific Earthquake Engineering Research center) Research funding, 2006-2007

PUBLICATIONS

Journal Papers:

Rezaeian, S., Y. Bozorgnia, I.M. Idriss, K. Campbell, N. Abrahamson and W. Silva (2013). “Damping scaling factors for vertical elastic response spectra for shallow crustal earthquakes in active tectonic regions,” *Earthquake Spectra*, Accepted for publication in August 2013.

Rezaeian, S., Y. Bozorgnia, I.M. Idriss, K. Campbell, N. Abrahamson and W. Silva (2013). “Damping scaling factors for elastic response spectra for shallow crustal earthquakes in active tectonic regions: ‘Average’ horizontal component,” *Earthquake Spectra*, Published online ahead of print September 6, 2013, doi: <http://dx.doi.org/10.1193/100512EQS298M>.

Rezaeian, S. and A. Der Kiureghian (2012). “Simulation of orthogonal horizontal ground motion components for specified earthquake and site characteristics,” *Earthquake Engineering and Structural Dynamics*, Vol. 41, pp. 335-353, doi: 10.1002/eqe.1132.

Rezaeian, S. and A. Der Kiureghian (2010). “Simulation of synthetic ground motions for specified earthquake and site characteristics,” *Earthquake Engineering and Structural Dynamics*, Vol. 39, pp. 1155-1180, doi: 10.1002/eqe.997.

Rezaeian, S. and A. Der Kiureghian (2008). “A stochastic ground motion model with separable temporal and spectral nonstationarities,” *Earthquake Engineering and Structural Dynamics*, Vol. 37, pp. 1565-1584, doi: 10.1002/eqe.831.

Articles under review or under development:

Rezaeian, S., M.D. Petersen, S.C. Harmsen, M. Moschetti, C.S. Mueller, P. Powers, N. Luco (2013). “Implementing NGA-West2 ground motion models in the 2014 Update of the United States national seismic hazard maps,” *Earthquake Spectra*, Submitted.

Bozorgnia, Y., Abrahamson, N., Al Atik, L., Ancheta, T., Atkinson, G., Baker, J., Baltay, A., Boore, D., Campbell, W., Chiou, B., Darragh, R., Day, S., Donahue, J., Graves, R., Gregor, N., Hanks, T., Idriss, I.M., Kamai, R., Kishida, T., Kottke, A., Mahin, S., **Rezaeian, S.**, Rowshandel, B., Seyhan, E., Shahi, S., Shantz, T., Silva, W., Spudich, P., Stewart, J., Watson-Lamprey, J., Wooddell, K., and R. Youngs (2013). “NGA-West2 Research Project,” *Earthquake Spectra*, submitted.

Rezaeian, S. and N. Luco. “Applications of a stochastic ground motion simulation methodology in structural engineering.”

Rezaeian, S., F. Zareian and P. Zhong. “A new methodology for validation of strong ground motion simulations.”

Technical Reports:

Rezaeian, S., Y. Bozorgnia, I.M. Idriss, K. Campbell, N. Abrahamson and W. Silva (2012). “Spectral damping scaling factors for shallow crustal earthquakes in active tectonic regions,” *PEER Report 2012/01*, Pacific Earthquake Engineering Research Center, University of California, Berkeley, CA. Available Online at: http://peer.berkeley.edu/publications/peer_reports/reports_2012/webPEER-2012-01-REZAEIAN.pdf

Bozorgnia, Y., **S. Rezaeian** and W. Anderson, Eds. (2011). “Seismic risk management in urban areas,” Proceedings of a U.S.-Iran-Turkey Seismic Workshop, *PEER Report 2011/07*, Pacific Earthquake Engineering Research Center, University of California, Berkeley, CA. Available Online at: http://peer.berkeley.edu/publications/peer_reports/reports_2011/webPEER-2011-07-Turkey-Proceedings.pdf

Rezaeian, S. and A. Der Kiureghian (2010). “Stochastic modeling and simulation of ground motions for performance-based earthquake engineering,” *PEER Report 2010/02*, Pacific Earthquake Engineering Research Center, University of California, Berkeley, CA. Available Online at: http://peer.berkeley.edu/publications/peer_reports/reports_2010/web_PEER10_02_REZAEIAN_DerKiureghian.pdf

Sanaz Rezaeian

Curriculum Vitae

September 2013

Rezaeian, S. (2010). "Stochastic modeling and simulation of ground motions for performance-based earthquake engineering," *Ph.D. Dissertation*, University of California, Berkeley, United States. Publication No. AAT 3413469.

Bozorgnia, Y., **S. Rezaeian** and W. Anderson, Eds. (2009). "Improving earthquake mitigation through innovations and applications in seismic science, engineering, communication, and response," Proceedings of A U.S.-Iran Seismic Workshop, *PEER Report 2009/02*, Pacific Earthquake Engineering Research Center, University of California, Berkeley, CA. Available Online at:
http://peer.berkeley.edu/publications/peer_reports/reports_2009/web_PEER902_US_IRAN.pdf

Reports under development:

McGowan, S., **S. Rezaeian** and N. Luco. "Earthquake loading data for the 2013 update of Unified Facilities Criteria (UFC) 3-301-01." *U.S. Geological Survey Open-File Report*.

Conference Proceedings:

Dabaghi, M., A. Der Kiureghian, **S. Rezaeian** and N. Luco (2013). "Seismic hazard analysis using simulated ground motions," *Proceedings of the 11th International Conference on Structural Safety & Reliability (ICOSSAR11)*, Columbia University, New York City, June 16-20.

Luco, N. and **S. Rezaeian** (2013). "Recent advances and ongoing efforts in developing earthquake ground motion maps and time series for building codes and risk quantification," *Proceedings of the 11th International Conference on Structural Safety & Reliability (ICOSSAR11)*, Columbia University, New York City, June 16-20.

Rezaeian, S. and N. Luco (2012). "Example applications of a stochastic ground motion simulation methodology in structural engineering," *Proceedings of the 15th World Conference on Earthquake Engineering (15WCEE)*, Lisbon, Portugal, September 24-28. Paper No. 2544.

Rezaeian, S., Y. Bozorgnia, I.M. Idriss, K. Campbell, N. Abrahamson and W. Silva (2012). "Damping scaling of response spectra for shallow crustal earthquakes in active tectonic regions," *Proceedings of the 15th World Conference on Earthquake Engineering (15WCEE)*, Lisbon, Portugal, September 24-28. Paper No. 0421.

Petersen, M.D., C.S. Mueller, K.M. Haller, M. Moschetti, S.C. Harmsen, E.H. Field, K.S. Rukstales, Y. Zeng, D.M. Perkins, P. Powers, **S. Rezaeian**, N. Luco, A. Olsen and R. Williams (2012). "2014 Update of the United States national seismic hazard maps," *Proceedings of the 15th World Conference on Earthquake Engineering (15WCEE)*, Lisbon, Portugal, September 24-28. Paper No. 2547.

Rezaeian, S. and A. Der Kiureghian (2011). "Stochastic simulation of earthquake ground motion components for performance-based structural analysis," *Proceedings of Seismic Risk Management in Urban Areas: A U.S.-Iran-Turkey Seismic Workshop*, Istanbul, Turkey, December 14-16, 2010. *PEER Report 2011/07*, pp. 31-39.

Dabaghi, M., **S. Rezaeian** and A. Der Kiureghian (2011). "Stochastic simulation of near-fault ground motions for specified earthquake and site characteristics," *Proceedings of the 11th International Conference on Applications of Statistics and Probability in Civil Engineering (ICASP11)*, Zurich, Switzerland, August 1-4, pp. 759-760.

Rezaeian, S. and A. Der Kiureghian (2010). "Synthetic earthquake ground motions for specified seismic design scenario," *Proceedings of the 9th US National and 10th Canadian Conference on Earthquake Engineering: Reaching Beyond Borders*, Toronto, Canada, July 25-29. Paper No. 735.

Rezaeian, S. and A. Der Kiureghian (2009). "Simulation of ground motion time-histories," *Proceedings of Improving Earthquake Mitigation through Innovations and Applications in Seismic Science, Engineering, Communication, and Response: A U.S.-Iran Seismic Workshop*, Irvine, California, June 29-July 1. *PEER Report 2009/02*, pp. 49-57.

Sanaz Rezaeian

Curriculum Vitae

September 2013

Rezaeian, S. A. Der Kiureghian and Y. Bozorgnia (2008). “Stochastic ground motion model with time-varying intensity, frequency and bandwidth characteristics,” *Proceedings of the 14th World Conference on Earthquake Engineering (14WCEE)*, Beijing, China, October 12-17. Paper No. 03-03-0033.

Der Kiureghian, A. and **S. Rezaeian** (2007). “A stochastic model for earthquake ground motion with separable temporal and spectral nonstationarity,” *Proceedings of the 10th International Conference on Applications of Statistics and Probability in Civil Engineering (ICASP10)*, Kashiwa, Japan, July 31-August 3, pp. 537-538.

Abstracts:

Rezaeian, S., P. Zhong and F. Zareian (2013). “Validation of simulated ground motions based on evolution of intensity and frequency content,” *2013 Southern California Earthquake Center (SCEC) Annual Meeting*, Palm Springs, CA, September 8-11.

Luco, N., T.H. Jordan and **S. Rezaeian** (2013). “Progress of the Southern California Earthquake Center technical activity group on ground motion simulation validation,” *2013 Seismological Society of America (SSA) Annual Meeting*, Salt Lake City, UT, April 17-19.

Petersen, M.D., **S. Rezaeian**, M. Moschetti, P. Powers, C.S. Mueller, A.D. Frankel and S.C. Harmsen (2013). “Evaluation of ground-motion models for the 2014 USGS national seismic hazard maps,” *2013 Seismological Society of America (SSA) Annual Meeting*, Salt Lake City, UT, April 17-19.

Rezaeian, S. (2012). “A method for validation of simulated ground motions using time-domain cumulative statistical characteristics,” *2012 Seismological Society of America (SSA) Annual Meeting*, San Diego, CA, April 17-19. SRL issue 83:2, pp. 371.

Rezaeian, S. (2011). “Stochastic simulation of ground motion components for specified earthquake and site characteristics: A tool for performance-based earthquake engineering,” *2011 Southern California Earthquake Center (SCEC) Annual Meeting*, Palm Springs, CA, September 11-14. Abstract Database: Poster B-009.

SELECTED TECHNICAL PRESENTATIONS

International Scientific Conferences:

“Young researchers in performance-based earthquake engineering.” (June 2013)

Organized a mini-symposium with Dr. Carmine Galasso to be held during the *11th International Conference on Structural Safety & Reliability (ICOSSAR11)*. New York, NY.

“Damping scaling of response spectra for shallow crustal earthquakes in active tectonic regions.” (Sept 2012)
15th World Conference on Earthquake Engineering (15WCEE). Lisbon, Portugal.

“2014 Update of the United States national seismic hazard maps.” (Sept 2012)
15th World Conference on Earthquake Engineering (15WCEE). Lisbon, Portugal.

“Stochastic models and simulation of earthquake ground motions.” (August 2011)

Organized and chaired a session with Prof. Armen Der Kiureghian during the *11th International Conference on Applications of Statistics and Probability in Civil Engineering (ICASP11)*. Zurich, Switzerland.

“Stochastic simulation of earthquake ground motion components.” (December 2010)

Seismic Risk Management in Urban Areas: A Turkish-Iranian-American Seismic Workshop. Bogazici University – Kandilli Observatory and Earthquake Research Institute. Istanbul, Turkey.

Sanaz Rezaeian

Curriculum Vitae

September 2013

“Synthetic earthquake ground motions for specified seismic design scenario.” (July 2010)
9th US National and 10th Canadian Conference on Earthquake Engineering: Reaching Beyond Borders. Toronto, Canada.

“Simulation of ground motion time-histories.” (June 2009)
Improving Earthquake Mitigation through Innovations and Applications in Seismic Science, Engineering, Communication, and Response: A U.S.-Iran Seismic Workshop. The National Academy of Sciences, Irvine, CA.

“Stochastic ground motion model with time-varying intensity, frequency, and bandwidth characteristics.” (Oct 2008)
14th World Conference on Earthquake Engineering (14WCEE). Beijing, China.

“A stochastic ground motion model with separable temporal and spectral nonstationarity.” (August 2007)
10th International Conference on Applications of Statistics and Probability in Civil Engineering (ICASP10). University of Tokyo, Kashiwa, Japan.

Other Scientific Events:

“Ground motion simulation validation (GMSV).” (September 2013)
Southern California Earthquake Center (SCEC) Technical Activity Group (TAG). Palm Springs, CA.

“Ground motion models, CEUS & WUS, in the 2014 update of the National Seismic Hazard Maps.” (May 2013)
National Steering Committee meeting for the USGS National Seismic Hazard Maps. Golden, CO.

“Ground motion simulation validation (GMSV).” (April 2013)
Southern California Earthquake Center (SCEC) Technical Activity Group (TAG). Los Angeles, CA.

“USGS National Seismic Hazard Mapping project workshop on ground motion prediction equations.” (Dec 2012)
Organized a two day workshop and gave several presentations. Berkeley, CA.

“Damping scaling models.” (November 2012)
NGA-West2 Preliminary Results Workshop (PEER). Berkeley, CA.

“A method for validation of simulated ground motions using time-domain cumulative statistical characteristics.” (April 2012)
Seismological Society of America Annual Meeting (SSA). San Diego, CA.

“Validation of strong ground motion simulations for engineering applications.” (April 2012)
Organized and chaired a session with Dr. Nicolas Luco and Dr. Thomas Jordan at the *2012 Seismological Society of America Annual Meeting (SSA)*. San Diego, CA.

“Stochastic simulation of ground motion time-series for specified earthquake and site characteristics.” (Feb 2011)
Structural Engineering, Mechanics and Materials Seminar (SEMM). Department of Civil and Environmental Engineering, University of California, Berkeley, CA.

“Stochastic simulation of ground motion components for a specified design scenario.” (October 2010)
Quake Summit 2010: NEES & PEER Annual Meeting. San Francisco, CA.

“Stochastic simulation of bi-directional earthquake ground motion.” (August 2010)
Engineering Mechanics Institute Conference (EMI 2010). Los Angeles, CA.

“Simulation of synthetic ground motions for specified earthquake and site characteristics.” (October 2009)
Pacific Earthquake Engineering Research Center Annual Meeting (PEER). San Francisco, CA.

Sanaz Rezaeian

Curriculum Vitae

September 2013

Poster Presentations:

“Validation of simulated ground motions based on evolution of intensity and frequency content.” (September 2013)
Southern California Earthquake Center Annual Meeting (SCEC). Palm Springs, CA.

“Applications of a stochastic ground motion simulation methodology in structural engineering.” (September 2012)
15th World Conference on Earthquake Engineering (15WCEE). Lisbon, Portugal.

“Validation of simulated ground motions using time-domain cumulative statistical measures.” (September 2012)
Southern California Earthquake Center Annual Meeting (SCEC). Palm Springs, CA.

“Stochastic simulation of ground motions: A tool for performance-based earthquake engineering.” (September 2011)
Southern California Earthquake Center Annual Meeting (SCEC). Palm Springs, CA.

“Simulation of ground motions.” (November 2009) & (December 2007)
Consortium of Organizations for Strong Motion Observation Systems (COSMOS). Millbrae, CA.
& *Structural Engineers Association of Northern California Annual Meeting (SEAONC)*. Berkeley, CA.

PROFESSIONAL EXPERIENCE

Research Civil Engineer (USGS, GS12), March 2011 - Present

U.S. Geological Survey, Golden, CO

Supervisors: Nicolas Luco, Mark Petersen

▪ **USGS Mendenhall Fellow (March 2011-March 2013):**

Project Title: PEER-USGS Collaboration on Modeling Earthquake Ground Motions and Seismic Hazard Analysis

Project Profile: <http://geology.usgs.gov/postdoc/profiles/rezaeian/index.html>

▪ **Current Involvements (projects started as part of or outside of the Mendenhall Fellowship):**

- Modeling and development of earthquake ground motion prediction equations in collaboration w/ PEER
- Implementation of ground motion models in the 2014 update of the National Seismic Hazard Maps
- Update of the USGS design maps according to the latest building code criteria
- Developing a new validation method for strong ground motion simulations
- Simulation-based engineering hazard and risk analysis
- Simulating ground motions for Central Eastern U.S earthquakes

PEER Post-Doctoral Researcher, June 2010 - March 2011

Pacific Earthquake Engineering Research (PEER) Center, University of California, Berkeley, CA

Supervisor: Yousef Bozorgnia

Projects: NGA-West2 & NGA-East

- Developed a model to scale ground motion prediction equations for damping ratios other than 5%
- Conducted research and chaired a group on developing models for vertical component of ground motion
- Wrote semi-annual progress reports to the funding agency for the two projects mentioned above
- Worked with and QA'd a database of over 8,000 recorded ground motions
- Served as a technical editor to the proceedings of *Seismic Risk Management in Urban Areas: A U.S.-Iran-Turkey Seismic Workshop* held in Istanbul, Turkey, December 14-16, 2010.

Graduate Student Researcher, January 2006-May 2010

University of California, Berkeley, CA

- Conducted original research on the development of a new stochastic model to simulate strong ground motions.
M.Sc. Thesis: A stochastic nonstationary model of earthquake ground motion
Ph.D. Dissertation: Stochastic simulation of ground motions for performance-based earthquake engineering

Sanaz Rezaeian

Curriculum Vitae

September 2013

Technical Editor, July 2009

Pacific Earthquake Engineering Research (PEER) Center, University of California, Berkeley, CA
Proceeding of *A U.S.-Iran Workshop on Improving Earthquake Mitigation*, June 29-July 1, 2009, Irvine, CA, sponsored by the U.S. National academy of Sciences

- Reviewed and edited selected papers for technical content.
- Assisted in organizing and editing the proceedings of the workshop

Structural Engineer, January-August 2005

Simpson Gumpertz & Heger (SGH), San Francisco, CA

- Conducted seismic evaluation of structures such as hospitals, parking garages, and multistory buildings.
- Performed structural analyses on steel trusses and residential wood frame buildings.
- Designed reinforced concrete slabs, beams, and columns.

Structural Engineering Intern, Summer 2004

Thornton-Tomasetti Group, Irvine, CA

- Performed lateral analyses on different types of structural frames.
- Designed retaining walls and structural components of buildings.

Civil Engineering Intern, Summer 2003

North Coast County Water District, Pacifica, CA

- Calculated cost estimates of small scale projects.
- Collected field data and performed hydraulic analyses for local water tanks and the piping system.

CERTIFICATION

Engineer-in-Training (EIT), Fundamentals of Engineering Examination, CA, passed: June 2004.
Certificate No 120239.

SELECTED VOLUNTEER WORK

Reviewer for the Following Scientific Journals, 2010-Present

- Earthquake Spectra
- Bulletin of the Seismological Society of America
- Seismological Research Letters
- Earthquake Engineering and Structural Dynamics
- Shock and Vibration
- British Journal of Applied Science & Technology

Executive Committee Member & Group Signatory, 2007-2010

Women of SEMM Graduate Student Group

Structural Engineering, Mechanics and Materials (SEMM) Program, UC Berkeley

- Cofounded the group in 2007
- Served as the group signatory in 2009-2010 academic year
- Managed a fundraising program
- Organized departmental activities to encourage social and academic interactions among students
- Conducted a departmental survey at the request of the SEMM program to obtain feedback from students

Sanaz Rezaeian

Curriculum Vitae

September 2013

TEACHING EXPERIENCE

Guest Lecturer (in the absence of the instructor), September 2009

Department of Civil and Environmental Engineering, University of California, Berkeley
Civil Engineering 193 (Undergraduate Course): *Engineering Risk Analysis*

Structural Engineering Expert / Speaker, Summer 2009

NSLC (National Student Leadership Conference): Engineering, Golden Gate Bridge, CA
Topic: Structural Engineering with a focus on Bridge Engineering

- Gave 3 lectures to three different groups of over 50 high school students.

Graduate Student Instructor, Spring 2008 & Fall 2008

Department of Civil and Environmental Engineering, University of California, Berkeley
Civil Engineering 93 (Undergraduate Course): *Engineering Data Analysis*

- Lectured and guided ~50 students through mini-projects during weekly computer lab sessions.
- Guest lectured in absence of the instructor.
- Conducted review sessions before examinations.
- Created and managed a class website.
- Assisted the instructor by preparing lab assignments and homework solutions.
- Held office hours to help students with their course work and to provide mentorship and academic advising.

EXPERIENCE IN WORKING WITH GRADUATE STUDENTS, 2010-Present

Mayssa Dabaghi, Ph.D. Student, University of California Berkeley

Advisor: Prof. Armen Der Kiureghian

Research: Simulation of near-fault earthquake ground motions

A conference paper is published (ICASP11, 2011) and another is underway (ICOSSAR11, 2013)

Peng Zhong, Ph.D. Student, University of California Irvin

Advisor: Prof. Farzin Zareian

Research: Validation of simulated ground motions

A poster was presented at the SCEC 2012 meeting and a journal paper is under development.

SELECTED GRADUATE LEVEL COURSE WORK

- Structural Analysis
- Nonlinear Structural Analysis
- Finite Element Methods
- Mechanics of Solids
- Reinforced Concrete Structures
- Dynamics of Structures
- Random Vibrations
- Structural Systems Reliability

Earthquake Engineering and Hazard:

- Advanced Earthquake Analysis
- Earthquake Resistant Design
- Earthquake Hazard Mitigation
- Geotechnical Earthquake Engineering
- Advanced Topics in Geotechnical Engineering
(Seismic Hazard Analysis and Design Ground motions)

Mathematics & Statistics:

- Numerical Analysis
- Linear Algebra
- Intro. to Probability & Statistics at an Advanced Level
- Regression Analysis

Sanaz Rezaeian

Curriculum Vitae

September 2013

COMPUTER SKILLS

Programming Languages:

MATLAB

Level of comfort: Expert

Have used MATLAB in various projects including development of a software for simulation of ground motions

Object Oriented Programming in C++

Level of comfort: Comfortable

Have taken advanced classes in C++ programming

Java

Have taken classes in Java programming

Fortran

Have experience working with Fortran codes in PEER and USGS

Have Experience Working with:

MathCAD OpenSees

CalREL FEAP

SAP 2000 BiSpec

SHAKE

Basic Computer Skills:

MS Office

Fireworks (graphics software)

AutoCAD (drafting software)

REFERENCES:

Prof. Armen Der Kiureghian

Taisei Chair in Civil Engineering

Department of Civil and Environmental Engineering

University of California, Berkeley

723 Davis Hall, University of California, Berkeley, CA 94720-1710

Phone: (510) 642-2469

E-mail: adk@ce.Berkeley.edu

Dr. Yousef Bozorgnia, P.E., F. ASCE

Executive Director

Pacific Earthquake Engineering Research Center (PEER)

325 Davis Hall, University of California, Berkeley, CA 94720-1792

Phone: (510) 642-3489

E-mail: yousef@berkeley.edu

Dr. Nicolas Luco

Research Structural Engineer

U.S. Geological Survey

PO Box 25046, MS 966, Denver, CO 80225

Phone: (303) 273-8683

E-mail: nluco@usgs.gov

Dr. Mark Petersen

Research Geophysicist, Coordinator of the National Seismic Hazard Mapping project

U.S. Geological Survey

PO Box 25046, MS 966, Denver, CO 80225

Phone: (303) 273-8546

E-mail: mpetersen@usgs.gov