

Gregory C. McLaskey

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USGS Mendenhall Post-Doc
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Education:

University of California, Berkeley CA

Ph.D. Civil Engineering: Civil Systems: May 2011

Stress wave source characterization: impact, fracture, and sliding friction

M.S. Civil Engineering: Structural Engineering, Mechanics, and Materials Dec. 2006

Cornell University Ithaca, NY

B.S. Civil Engineering, *Magna cum Laude*, May 2005

Professional Experience

Research Civil Engineer, United States Geological Survey, Menlo Park, CA 2011 - present

Graduate Student Instructor, University of California, Berkeley 2009

Graduate Research Assistant, University of California, Berkeley 2006 - 2011

Selected Awards

USGS Mendenhall Post-Doctoral Fellowship 2011

UC Berkeley Nanoscience Fellowship 2009

National Science Foundation Graduate Research Fellow 2006

Peer Reviewed Journal Publications:

1. McLaskey, G. C., Lockner, D. A., Kilgore, B. D., and Beeler, N. M. (2014) " A robust calibration technique for acoustic emission systems based on momentum transfer from a ball drop " in preparation
2. McLaskey, G. C., and Lockner, D. A., (2014) "Preslip and cascade processes initiate laboratory stick-slip" *Journal of Geophysical Research*, in preparation
3. McLaskey, G. C., Kilgore, B., D., Lockner, D. A., Beeler, N., M. (2014) "Laboratory generated M -6 earthquakes" *Pure and Applied Geophysics* DOI 10.1007/s00024-013-0772-9
4. McLaskey, G. C., and Kilgore, B. D (2013) "Foreshocks during the nucleation of stick-slip instability" *Journal of Geophysical Research* 118, 2982-2997.
5. McLaskey, G. C., Thomas, A. M., Glaser, S. D., and Nadeau, R. M. (2012) "Fault healing promotes high frequency earthquakes in laboratory experiments and on natural faults" *Nature* 491, pp. 101–104.
6. McLaskey, G. C. and Glaser, S. D. (2012) "Acoustic emission sensor calibration for absolute source measurements," *Journal of Nondestructive Evaluation* 31(2) pp. 157-168
7. McLaskey, G. C. and Glaser, S. D. (2011) "Micromechanics of asperity rupture during laboratory stick slip experiments" *Geophysical Research Letters*, 38, L12302.
8. McLaskey, G. C. and Glaser, S. D. (2010) "Hertzian impact: experimental study of the force pulse and resulting stress waves," *Journal of the Acoustical Society of America* 128 (3) pp. 1087-1096.
9. McLaskey, G. C., Glaser, S. D., and Grosse, C. U., (2010) "Beamforming array techniques for acoustic emission monitoring of large concrete structures," *Journal of Sound and Vibration*, 329 (12) pp. 2384-2394.

10. McLaskey, G. C., and Sansalone, M., (2006) "Nondestructive Dynamic Evaluation of a Concrete Reaction Wall," *ASCE Journal of the Performance of Constructed Facilities*

Invited Talks

2010: Non-destructive testing workshop, Technical Univ. of Munich, Germany
2010: UC Berkeley seismological laboratory
2011: UC Santa Cruz institute for geophysics and planetary physics
2012: USGS earthquake science center, Menlo Park, California
2012: Crustal dynamic modeling workshop, Golden Colorado
2013: Caltech seismological laboratory
2013: USGS earthquake science center, Menlo Park, California
<http://earthquake.usgs.gov/regional/nca/seminars/2013-06-19/>
2013: Stanford Geophysics Department
2014: NIED Tsukuba, Japan

Book Chapters:

1. McLaskey, G. C. and Glaser, S. D. (2009) "Nanoseismic measurement of the localized initiation of sliding friction," in *Meso-Scale Shear Physics in Earthquake and Landslide Mechanics*, eds. Y. H. Hatzor, J. Sulem, and I. Vardoulakis, CRC Press
ISBN: 9780415475587

Selected Conference Papers

1. McLaskey, G., Glaser, S., (2009) "High-fidelity conical piezoelectric transducers and finite element models utilized to quantify elastic waves generated from ball collisions," in: M. Tomizuka, C. Yun, V. Giurgiutiu (Eds.), *Proc. SPIE*, vol. 7292, 72920S-1 - 72920S-18.
2. McLaskey, G. C. and Glaser, S. D. (2007) "Temporal Evolution and 3D Locations of Acoustic Emissions Produced from the Drying Shrinkage of Concrete," *Journal of Acoustic Emission* 25(1) pp. 52-57.
3. McLaskey, G., Glaser, S., Grosse, C., (2007) "Integrating Broad-Band High-Fidelity Acoustic Emission Sensors and Array Processing to Study Drying Shrinkage Cracking in Concrete" *Proc. of SPIE* Vol. 6529 65290C

Conference Abstracts:

McLaskey, G. C., and Lockner, D. A. (2014) "Stick-slip instability in granite initiated as acoustic emission event" *Seismological Society of America annual meeting*, Anchorage, AK.

McLaskey, G. C., Kilgore, B. D., Lockner, D. A, Beeler, N. M. (2013) "Seismic waves radiated during dynamic rupture of granite laboratory samples" *American Geophysical Union, Fall Meeting 2013*, San Francisco, CA.

McLaskey, G. C., Kilgore, B. D., Beeler, N. M., and Lockner, D. A. (2013) "M -6 laboratory earthquakes driven by aseismic slip" *American Geophysical Union, Fall Meeting 2013*, San Francisco, CA.

McLaskey, G. C., Kilgore, B. D., Beeler, N. M., and Lockner, D. A. (2013) “M -6 laboratory earthquakes driven by aseismic slip” *SCEC Annual meeting 2013*, Palm Springs, CA

McLaskey, G. C., Kilgore, B. D., Lockner, D. A., Beeler, N. M. (2013) “Seismic source spectra of laboratory earthquakes” *Seismological Society of America annual meeting*, Salt Lake City. UT.

McLaskey, G. C., Kilgore, B. D., Beeler, N. M., and Lockner, D. A. (2012) “Repeating foreshock sequences and laboratory stick-slip” *American Geophysical Union, Fall Meeting 2012*, San Francisco, CA.

McLaskey, G. C., Kilgore, B. D., Beeler, N. M., and Lockner, D. A. (2012) “Earthquake nucleation: stressing rate affects foreshock occurrence and minimum earthquake size” *European Center for Geodynamics and Seismology workshop 2012: Earthquakes source physics on various scales*, Luxembourg.

McLaskey, G. C., Kilgore, B. D., and Beeler, N. M. (2012) “Earthquake source physics studied with elastodynamic modeling and laboratory seismology” *Seismological Society of America annual meeting*, San Diego, CA.

McLaskey, G. C., Glaser, S. D., Thomas, A., and Bürgmann, R. (2011) “Fault healing and earthquake spectra from stick-slip sequences in the laboratory and on active faults” *American Geophysical Union, Fall Meeting 2011*, abstract #T13A-2346

McLaskey, G. C. and Glaser, S. D. (2010), Micromechanics of friction studied nanoseismically on laboratory faults, *American Geophysical Union, Fall Meeting 2010*, abstract #S54A-05

McLaskey, G. C. and Glaser, S. D. (2010), Discrete rupture of asperities recorded on instrumented laboratory faults, *SCEC Annual Meeting*, Palm Springs, CA, September 11-15, 2010

McLaskey, G. C. and Glaser, S. D. (2009), Nanoseismic sources made in the laboratory: source kinematics and time history, *American Geophysical Union, Fall Meeting 2009*, abstract #S21B-1716