

CURRICULUM VITAE

E. S. COCHRAN

Research Geophysicist
US Geological Survey
525 S. Wilson Ave
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APPOINTMENTS

2011 – Present Research Geophysicist, US Geological Survey
2011 – Present Visiting Associate in Geophysics, California Institute of Technology
2007 – 2011 Assistant Professor, Department of Earth Sciences, University of California, Riverside
2005 – 2007 Postdoctoral Scholar, Institute of Geophysics and Planetary Physics, Scripps
2000 – 2005 Research Assistant and Research Associate, Department of Earth and Space Science, University of California, Los Angeles

ACADEMIC PREPARATION

University of California, Santa Barbara	Geophysics	B.S., 2000
University of California, Los Angeles	Geophysics and Space Physics	M.S., 2003
University of California, Los Angeles	Geophysics and Space Physics	Ph.D., 2005

HONORS AND ACTIVITIES

- Presidential Early Career Award for Scientists and Engineers (PECASE), 2010
- NSF Faculty Early Career Development (CAREER) Award, 2010
- Geological Society of America, Subaru Outstanding Woman in Science Award, 2006
- Young Fellow of the Institute of Geophysics and Planetary Physics, 2004.
- Southern California Earthquake Center Seismology Discipline Co-Chair, 2009-present
- IRIS Data Management System Standing Committee, 2008-2010.
- Peer Reviewer for: Nature, Geology, Geophys. Res. Lett., J. Geophys. Res., Geophys. J. Int., Bull. Seis. Soc. Am., Earth Plan. Space, Pure Appl. Geophys., J. Seis., Ann. Geophys., Natural Hazards, 2004 – Present.

MENTORING AND COLLABORATORS

(i) Thesis and Postgraduate-Scholar Mentoring

- Masters and Doctoral Students: K. Kroll (PhD, 2009 - present), C. Neighbors (PhD, 2008 - present), T.-H. Wang (PhD, 2008- present)
- Postdoctoral Scholars: D. Sumy (2011-present), M. Aly (2009-2010), R.S. Jakka (2008-2009)

(ii) Graduate Advisors and Postdoctoral Sponsor:

- Doctoral Advisors: Vidale, J. (University of Washington); Peltzer, G. (UC Los Angeles)
- Postdoctoral Sponsor: Shearer, P. (UC San Diego)

SELECTED INVITED PRESENTATIONS

- The Quake-Catcher Network: A volunteer computing seismic network, *International Symposium on Grids and Clouds*, Taipei, Taiwan, March 2011.
- Imaging Fault Damage Zones with Seismic and Geodetic Data, *Universidad Nacional Autonoma de Mexico*, August 2010.
- Using Innovative Sensing and Distributed Computing to Build Dense Seismic Networks, *Department of Terrestrial Magnetism, Carnegie Institute of Washington*, April 2010.
- The Quake Catcher Network: Cyberinfrastructure Bringing Seismology into Homes and Schools, *Corporation for Education Network Initiatives in California Annual Conference*, March 2009.
- The Quake-Catcher Network: Distributed Computing for Seismic Event Detection, *Carnegie Mellon University*, May 2008.
- Fault Damage Zones: Recent Results from Seismic and InSAR Studies, *UJNR Workshop, Japan*, November 2006.
- The Frailty of Faults: Cracks, Damage, and Fault Interaction, *Scripps*, November 2004.
- How to trigger a fault: strong modulation of earthquakes by Earth tides, University of Southern California, Earthquake Physics, September 2004.
- Post-seismic deformation following the M7.1 Hector Mine Earthquake from InSAR and seismic data, European Geosciences Meeting, April 2004.
- Crustal anisotropy near the Hector Mine rupture zone: Implications for post-mainshock stress patterns, Caltech, February 2003.

PUBLICATIONS

- **Cochran, E.S.**, J.F. Lawrence, A. Kaiser, B. Fry, A. Chung, and C. Christensen, Comparison between low-cost and traditional MEMS accelerometers: a case study from the M7.1 Darfield, New Zealand aftershock deployment, *Annals Geophys.*, 54(6), 728-737, doi:10.4401/ag-5268, 2011.
- Chung, A.I., C.J. Neighbors, A. Belmonte, M. Miller, H.H. Sepulveda, C. Christensen, R. Jakka, **E.S. Cochran**, and J.F. Lawrence, The Quake-Catcher Network Rapid Aftershock Mobilization Program Following the 2010 M8.8 Maule, Chile Earthquake, *Seism. Res. Lett.*, 82, 526-532, 2011.
- Yang, H., L. Zhu, and **E.S. Cochran**, 2011. Seismic Structures of the Calico Fault Zone Inferred From Local Earthquake Travel Time and Waveform Modelling, *Geophys. J. Int.*, doi: 10.1111/j.1365-246X.2011.05055.x, 2011.
- Aly, M., **E.S. Cochran**, Spatio-Temporal Evolution of the Yellowstone Deformation from 1992 to 2009: InSAR and GPS Observations. *Bull. Volc.*, doi: 10.1007/s00445-011-0483-y, 2011.
- Jakka, R.S., **E.S. Cochran**, and J.F. Lawrence, Earthquake source characterization by the isochrone back projection method using near-source ground motions, *Geophys. J. Int.*, doi: 10.1111/j.1365-246X.2010.04670.x, 2010.
- **Cochran, E.S.**, J.F. Lawrence, C. Christensen, A. Chung, A Novel Strong-Motion Seismic Network for Community Participation in Earthquake Monitoring. *IEEE Instrumentation and Measurement Magazine*, Vol. 12 (6): December 2009 p.8-15, 2009.
- **Cochran, E.S.**, Y.-G. Li, P.M. Shearer, S. Barbot, Y. Fialko, and J.E. Vidale, Seismic and geodetic evidence for extensive, long-lived fault damage zones, *Geology*, 37, 315-318, 2009.
- **Cochran, E.S.**, J.F. Lawrence, C. Christensen, and R.S. Jakka, The Quake-Catcher Network: Citizen science expanding seismic horizons, *Seism. Res. Letts.*, 80, 26-30, 2009.

- Li, Y.-G., P. Chen, **E.S. Cochran**, and J.E. Vidale, Seismic variations on the San Andreas fault caused by the 2004 M6 Parkfield earthquake and their implications, *Earth Planets Space*, 59, 21-31, 2007.
- **Cochran, E.S.**, Y.-G. Li, and J.E. Vidale, Anisotropy in the shallow crust observed around the San Andreas Fault before and after the 2004 M6 Parkfield earthquake, *Bull. Seis. Soc. Am.*, 96, S364-S375, 2006.
- **Cochran, E.S.**, and P.M. Shearer, Infrasound events detected with the Southern California Seismic Network, *Geophys. Res. Letts.*, 33, L19803, doi:10.1029/2006GL026951, 2006.
- Li, Y.-G., P. Chen, **E.S. Cochran**, J.E. Vidale, and T. Burdette, Seismic evidence for rock damage and healing on the San Andreas fault associated with the 2004 M6 Parkfield earthquake, *Bull. Seis. Soc. Am.*, 96, S349-S363, 2006.
- **Cochran, E.S.**, J.E. Vidale, and S. Tanaka, Earth tides can trigger shallow thrust fault earthquakes, *Science*, 306, 1164-6, 2004.
- Li, Y.G., J.E. Vidale, and **E.S. Cochran**, Low-velocity damaged structure of the San Andreas Fault at Parkfield from fault-zone trapped waves. *Geophys. Res. Lett.*, doi:10.1029/2003GL019044, 2004.
- Li, Y.G., J.E. Vidale, S.M. Day, D.D. Oglesby, and **E.S. Cochran**, Postseismic fault healing on the rupture zone of the 1999 M7.1 Hector Mine, California, earthquake. *Bull. Seis. Soc. Am.*, 854-869, 2003.
- Li, Y.G., J.E. Vidale, D.D. Oglesby, S.M. Day, and **E.S. Cochran**, Multiple-fault rupture of the M7.1 Hector Mine, California, earthquake from fault zone trapped waves. *J. Geophys. Res.*, 108, doi:10.1029/2001JB001456 p.2165, 2003.
- **Cochran, E.S.**, J.E. Vidale, and Y.-G. Li, Near-fault anisotropy following the Hector Mine earthquake, *J. Geophys. Res.*, 108, 2436, doi:10.1029/2002JB002352, 2003.