

Andrea Donnellan: USC/JPL

Education

Ph.D., Geophysics, California Institute of Technology (1991)

M.S., Geophysics, California Institute of Technology (1988)

B.S., Geology, Ohio State University, *with honors and distinction in geology* (1986)

Professional Experience

Research Assistant Professor, Department of Earth Sciences, University of Southern California (1999–present)

Supervisor, Data Understanding Systems Group, Jet Propulsion Laboratory (1999–present)

Research Scientist, Satellite Geodesy and Geodynamics Systems Group, Jet Propulsion Laboratory (1997–1999)

Member of Technical Staff, Satellite Geodesy and Geodynamics Systems Group, Jet Propulsion Laboratory (1993–1997)

Visiting Associate, Seismological Laboratory, California Institute of Technology, (1995–1996)

National Research Council Resident Research Associate, NASA Goddard Space Flight Center (1991–1993)

Graduate Research Assistant, California Institute of Technology (1986–1991)

Research Assistant, Institute of Polar Studies, Ohio State University (1983–1986)

Professional Activities

Plate Boundary Observatory steering committee (1999–present)

General Earthquake Models (GEM) program planning committee co-chair (1998–present)

Convenor NSF/NASA Sponsored Autonomous Systems in Extreme Environments Workshop (1999)

AGU 2000 and 2001 Spring Meeting program committee geodesy section chair-elect (2000) and chair (2001)

AGU Geodesy representative for education and outreach (1999)

GEM Data committee co-chair (1999–present)

SCEC Crustal Deformation Working Group (1993–present)

SCIGN Coordinating Board and associated committees (SCEC rep: 1994–1998; NASA rep: 1999–present)

AGU Geodesy Section educational outreach representative (1999)

UNAVCO Field Operations Working Group, Chair (1995–1997)

Member American Geophysical Union (1986–present)

Development Oversight of SCEC GPS Educational Modules (1996–present)

Panel member National Earthquake Hazards Reduction Program External Research Program (1994–1999)

Awards

Southern California Earthquake Center Outreach Award for Education (1998)

Presidential Early Career Award for Scientists and Engineers (1996)

National Research Council Postdoctoral Fellowship (1991–1993)

Outstanding Student Paper Award, Geodesy Section, Fall AGU Meeting (1990)

Current Projects

Development of a fully three-dimensional finite element code for studying fault interactions.

Development and deployment of three of autonomous continuous GPS systems in Marie Byrd Land, Antarctica. Work involved assembling a team to develop and deploy the system, and collaboration with companies to develop and supply appropriate hardware.

Workshop convenor: Autonomous Systems in Extreme Environments.

GPS data collection and modeling of the Northridge earthquake region and Ventura basin.

Numerical modeling of Southern California Integrated GPS Network (SCIGN) data.

Modeling of postseismic results from the Landers earthquake.

Oversight of the development of SCEC DESC online web-based educational modules.

Recent Publications

Lyzenga, G.A., W.R. Panero, A. Donnellan, The Influence of Anelastic Surface Layers on Postseismic Thrust Fault Deformation, *J. Geophys. Res.*, in press.

Argus, D., M.B. Heflin, A. Donnellan, F.H. Webb, D. Dong, K.J. Hurst, G.A. Lyzenga, M.M. Watkins, and J.F. Zumberge, Shortening and Thickening of Metropolitan Los Angeles Measured and Inferred Using Geodesy, *Geology*, *27*, 703–706, 1999.

Lundgren, P., M. Protti, A. Donnellan, M. Heflin, E. Hernandez, D. Jefferson, Seismic cycle and plate margin deformation in Costa Rica: GPS observations 1994–1997, *J. Geophys. Res.*, in press.

Donnellan, A. and G. A. Lyzenga, Fault afterslip and upper crustal relaxation following the Northridge earthquake, *J. Geophys. Res.*, *103*, 21,285–21,297, 1998.

Donnellan, A. and F.H. Webb, Geodetic observations of the M 5.1 January 29, 1994 Northridge aftershock, *Geophys. Res. Lett.*, *25*, 667–670, 1998.

Relevant Publications

Heflin, M.B., D. Darger, D. Dong, A. Donnellan, K. Hurst, D. Jefferson, G. Lyzenga, M. Watkins, F. Webb, J. Zumberge, Rate change observed at JPLM after the Northridge earthquake, *Geophys. Res. Lett.*, *25*, 93–96, 1998.

Hager, B.H., G.A. Lyzenga, A. Donnellan, and D. Dong, Reconciling Rapid Strain Accumulation with Deep Seismogenic Fault Planes in the Ventura Basin, California, *J. Geophys. Res.*, in press.

Bawden, G., A. Donnellan, L. Kellogg, D. Dong, J. Rundle, Geodetic measurements of seven decades of horizontal strain near the White Wolf fault, Kern County California: I. Observations, *J. Geophys. Res.*, *102*, 4957–4976, 1997.

Grant, L. B., and A. Donnellan, 1855 and 1991 surveys of the San Andreas fault: Implications for fault mechanics, *Bull. Seism. Soc. Am.*, *84*, 241–246, 1994.

Donnellan, A., B. H. Hager, and R. W. King, Discrepancy between geologic and geodetic deformation rates in the Ventura basin, *Nature*, *366*, 333–336, 1993.

Ph.D. Advisor: Brad Hager (now at MIT)

Recent Collaborators: Bruce Bills (NASA/GSFC and Scripps), Danan Dong (JPL), Louise Kellogg (UCD), J. Lee (WPI), Bruce Luyendyk (UCSB), Greg Lyzenga (Harvey Mudd), Jay Parker (JPL), John Rundle (Colorado)

Student Advisees: Gerald Bawden (UCD), Maggi Glasscoe (UCD)