

Danielle F. Sumy

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Maiden Name: Danielle F. Stroup
Citizenship: United States of America

EDUCATION:

2009 *M.Phil.* Columbia University, New York, NY
2008 *PhD Candidacy Examination*, Unconditional Pass, Columbia University, New York, NY
Major: Marine Geophysics *Minors:* Seismology, Tectonophysics
2007 *M.A.* Columbia University, New York, NY
2005 *B.S.* Florida State University, Tallahassee, FL (*magna cum laude*)
Major: Interdisciplinary Physics, with Geology *Minors:* Mathematics, French

EMPLOYMENT:

9/05 – present Graduate Fellow, Department of Earth and Environmental Sciences
Lamont-Doherty Earth Observatory, Columbia University
5/04 – 8/04 Intern, Research Experience for Undergraduates, National Science Foundation
Department of Physics, University of Colorado
1/04 – 12/04 Research Assistant, Department of Geology, Florida State University
6/03 – 8/03 Intern, Research Experience for Undergraduates, National Science Foundation
Department of Oceanography, University of Rhode Island

MAJOR RESEARCH INTERESTS:

- Spatio-temporal distribution of earthquake activity
- Earthquake characteristics and mechanisms
- Magmatic, tectonic, and hydrothermal interactions at mid-ocean ridges

FIELD AND SEA GOING EXPERIENCE:

6/09 Seismometer installation team, Bermuda.
1/08 Shipboard scientific party, *R/V Langseth*, Hydroacoustic calibration of airgun array for marine mammal impact assessment, Gulf of Mexico
1/07 Shipboard scientific party, *R/V Atlantis*, Deep-tow camera operations and ocean bottom seismometer recovery, 9°50'N East Pacific Rise
7-8/03 Watchstander, *R/V Bjarni Seamundsson*, Deep-tow camera operations, CHIRP surveying, and coring, Tjornes Fracture Zone

HONORS AND AWARDS:

2005 Lynn Shannon Proctor Award – Outstanding Female Student in Physics
Department of Physics, Florida State University

- 2005 Elected Phi Beta Kappa
- 2005 Elected Sigma Pi Sigma
- 2003 Elected National Society of Collegiate Scholars
- 2001 Florida Bright Futures Scholarship
- 2001 Florida State University Tuition Scholarship for Academic Achievement

PROFESSIONAL SOCIETIES:

- American Association of Petroleum Geologists
- American Geophysical Union
- The American Association for the Advancement of Science

UNIVERSITY SOCIETIES:

- Women in Science at Columbia University
- Women in Math, Science, and Engineering at Florida State University

PUBLICATIONS:

Peer-reviewed journal articles

Stroup, D. F., M. Tolstoy, T. J. Crone, A. Malinverno, D. R. Bohnenstiehl, and F. Waldhauser (2009), Systematic Along-Axis Tidal Triggering of Microearthquakes Observed at 9°50'N East Pacific Rise, *Geophys. Res. Lett.*, doi: 10.1029/2009GL039493.

Stroup, D. F., D. R. Bohnenstiehl, M. Tolstoy, F. Waldhauser, and R. T. Weekly (2007), Pulse of the seafloor: Tidal Triggering at 9°50'N East Pacific Rise, *Geophys. Res. Lett.*, doi: 10.1029/2007GL030088.

Published meeting abstracts

Gaherty, J., **D. Stroup**, J. Collins, C. Huerta, and R. Castro (2009), Seismicity and Faulting in the Southern Gulf of California from the Sea of Cortez Ocean-Bottom Array (SCOoba) seismic experiment, MARGINS Rupturing Continental Lithosphere: Synthesis and New Perspectives, Charleston, SC, 30 April – 2 May.

Gaherty, J., **D. Stroup**, J. Collins, C. Huerta, and R. Castro (2008), Seismicity and Faulting in the Southern Gulf of California from the Sea of Cortez Ocean-Bottom Array (SCOoba) experiment, *Eos Trans. AGU*, 89(53), *Fall Meet. Suppl.*, Abstract T13E-01.

Crone, T. J., M. Tolstoy, and **D. F. Stroup** (2008), Two-dimensional Models of Poroelastically-Controlled Earthquake Triggering at the East Pacific Rise, *Eos Trans. AGU*, 89(53), *Fall Meet. Suppl.*, Abstract B23F-06.

Stroup, D. F., M. Tolstoy, T. J. Crone, A. Malinverno, D. R. Bohnenstiehl, and F. Waldhauser (2008), Tidal Triggering of Microearthquakes Constrains Permeability at 9°50'N East Pacific Rise, *Eos Trans. AGU*, 89(53), *Fall Meet. Suppl.*, Abstract B21A-0324.

Stroup, D. F., M. Tolstoy, T. J. Crone, A. Malinverno, D. R. Bohnenstiehl, and F. Waldhauser (2008), The Relationship between Poroelastic Effects and Tidal Triggering of Microearthquake

Activity at 9°50'N East Pacific Rise , RIDGE 2000 Community Meeting, Mantle to Microbe: Integrated Studies at Oceanic Spreading Centers, Portland, OR, 24-26 March.

Stroup, D. F., D. R. Bohnenstiehl, M. Tolstoy, F. Waldhauser, and R. T. Weekly (2007), Variability in Tidal Triggering of Microearthquake Activity at 9°50'N East Pacific Rise, *Eos Trans. AGU*, 88(52), *Fall Meet. Suppl.*, Abstract T33B-1377.

Stroup, D. F., D. R. Bohnenstiehl, M. Tolstoy, F. Waldhauser, and R. T. Weekly (2006), Tidal Triggering of Microearthquakes at 9°50'N on the East Pacific Rise, *Eos Trans. AGU*, 87, *Fall Meet. Suppl.*, Abstract B318-1102.

Stroup, D. F., M. Tolstoy, D. R. Bohnenstiehl, and F. Waldhauser (2006), Tidal Triggering of Microseismicity at 9°50'N on the East Pacific Rise, RIDGE 2000 sponsored Ridge Theoretical Institute, Modeling Hydrothermal Processes at Oceanic Spreading Centers: Magma to Microbe, Mammoth Lakes, CA, 25-30 June.

Stroup, D. F., and J. E. Georgen (2004), Inferred Variations in Crustal Accretion Processes Along the Southwest Indian Ridge Near the Marion Hotspot, *Eos Trans. AGU*, 85, *Fall Meet. Suppl.*, Abstract T41D-1245.

Manuscripts Written During Undergraduate Internships

Stroup, D. F., and M. Ritzwoller (2004), Surface Wave Dispersion: Improving the Global Seismic Model and Observing Hotspots of the Southwest Indian Ridge.

Stroup, D. F., and Y. Shen (2003), Analyzing Tsunamigenesis Using Relationships Between Seismic Moment and Spectral Strength.

INVITED TALKS:

- “Pulse of the seafloor: Tidal Triggering of Microearthquakes at 9°50'N East Pacific Rise”, Lamont-Doherty Earth Observatory’s Division of Seismology, Geology, and Tectonophysics Seminar Series, Fall 2007.

UNIVERSITY INVOLVEMENT AND TEACHING EXPERIENCE:

Spring 2009: *Lab Instructor*, Solid Earth Systems, Profs. Steve Goldstein and Sidney Hemming

Summer 2008: *Panelist*, Women in Science at Columbia, REU graduate school panel

Spring 2008: *Teaching Assistant*, Introduction to Geophysics, Prof. Dennis Hayes

Fall 2006: *Lab Instructor*, Solid Earth Systems, Prof. William Menke

B. S. Advisor: J. E. Georgen

M. A. Advisors: D. R. Bohnenstiehl, W. Menke, and M. Tolstoy

Ph.D. Committee/Advisors: J. B. Gaherty, W. Menke, and M. Tolstoy