

CURRICULUM VITAE

BRIDGET R. SMITH-KONTER

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EDUCATION

Ph.D. Geophysics (Earth Science), 1999-
2005
Scripps Institution of Oceanography
University of California, San Diego

B.S., magna cum laude Major Physics & Astronomy, Minor Mathematics, 1995-
1999
Northern Arizona University

APPOINTMENTS

2008 (Jan.)	University of Texas at El Paso	Assistant Professor
2007-2008	JPL, California Institute of Technology	Postdoctoral Scholar
2005-2007	Scripps Institution of Oceanography, UCSD	Postdoctoral Scholar/Lecturer
1999-2005	Scripps Institution of Oceanography, UCSD	Graduate Student Researcher

PROFESSIONAL EXPERIENCE

Assistant Professor, University of Texas at El Paso, 2008-present

Postdoctoral Researcher, NASA, Jet Propulsion Laboratory, Caltech, 2007

- Modeling tidally-driven 3-D viscoelastic stress accumulation and failure on fractures of Europa and Enceladus

Postdoctoral Researcher, Scripps Institution of Oceanography, UC San Diego, 2005-2006

- Vertical constraints on plate boundary motion from California coastal tide gauge records
- Refinement of 3D semi-analytic crustal deformation model of San Andreas Fault System
- 1000-year deformation and stress models of the San Andreas Fault System constrained by geologic, geodetic, and paleoseismic data

Graduate Student Researcher, Scripps Institution of Oceanography, UC San Diego, 1999-2005

- Lithospheric deformation and Coulomb stress evolution of the San Andreas Fault System
- Development, verification, & application of 3D elastic and viscoelastic body force model
- Shuttle Radar Topography Mission Data resolution analysis and application

DISSERTATION

Title: Three-dimensional Deformation and Stress Models: Exploring One-Thousand Years of Earthquake History Along the San Andreas Fault System

Dissertation Advisor: David T. Sandwell

FUNDING

NSF CAREER (\$501,048) 6/1/09 - 5/13/14: *CAREER: An integrated geologic, geodetic, and paleoseismic study of plate boundary stress evolution and geoscience education utilizing the EarthScope database*; **PI = B. Smith-Konter.**

NSF Tectonics (\$232,299) 1/1/09 - 12/31/11: *Integrating geologic, geodetic, and coastal tide gauge observations with 100-year vertical deformation models of California earthquake history*; **PI = B. Smith-Konter.**

NASA Outer Planets Research (\$270,000) 6/1/08 - 5/31/11; *Three-dimensional semi-analytic viscoelastic earthquake modeling as applied to faulting processes on Enceladus and Europa*; **PI = B. Smith-Konter; Co-PI = R.T. Pappalardo (JPL).**

NASA Earthscope (\$386,471) 1/1/09 - 12/31/11; *Geodetic imaging and modeling of the San Andreas Fault System*; **PI = D. Sandwell (UC San Diego); Co-PI = B. Smith-Konter.**

NSF Southern California Earthquake Center (\$16,900) 2/1/08 - 1/31/09; *Stress uncertainties of the San Andreas Fault System due to variations in slip rates, fault locking depths, & fault rheology*; **PI = B. Smith-Konter; Co-PI = D. Sandwell (UC San Diego).**

NSF Southern California Earthquake Center (\$13,600) 2/1/07 - 1/31/08; *Modeling secular and time-dependent stress accumulation in Southern California*; **PI = D. Sandwell (UC San Diego); Co-PI = B. Smith-Konter (formerly at UC San Diego).**

TEACHING EXPERIENCE

Instructor	Introduction to GIS	UTEP	Spring	2008
Instructor	Principles of Earth Science II	UTEP	Spring	2008
Instructor	Computer Applications in Geoscience	UTEP	Fall	2008
Instructor	Digital Image Processing	UTEP	Fall	2008
Instructor	Principles of Earth Science II	UTEP	Spring	2008
Instructor	Earthquakes in Action (COSMOS)	UCSD	Summer	2006
Instructor	The Planets	UCSD	Spring	2006
Instructor	Frontiers in Plate Boundary Deformation	UCSD	Fall	2005
Instructor	Earthquakes in Action (COSMOS)	UCSD	Summer	2005
Instructor	The Planets	UCSD	Spring	2005
Teaching Assistant	The Atmosphere	UCSD	Winter	2004
Teaching Assistant	The Atmosphere	UCSD	Winter	2003
Teaching Assistant	The Atmosphere	UCSD	Winter	2002
Teaching Assistant	Geodynamics of the Terrestrial Planets	UCSD	Fall	2002
Teaching Assistant	Geodynamics of the Terrestrial Planets	UCSD	Fall	2001

Committee Chair	SIO Outstanding Teaching Award Committee	2003-2004
SIO Student Body Vice-Chair	Students@SIO	2002-2003
SIO Geophysics Representative	Students@SIO	2001-2002
Program Staff Manager	NASA Ames Astrobiology Academy	2000

SERVICE TO THE PROFESSION

PEER REVIEWER: NSF-Geophysics

PEER REFEREE: *Geology, Earth Planet. Sci. Lett., Geophys. J. Int.*

PROFESSIONAL MEMBERSHIPS

Seismological Society of America	2008 –
Geological Society of America	2008 –
American Geophysical Society	1999 -
Golden Key National Honor Society	1997-1999
Phi Kappa Phi National Honor Society	1997-1999

FIELD EXPERIENCE AND CRUISE PARTICIPATION

1. Geodetic mapping survey of the Ancient Lake Cahuilla shoreline, Salton Trough (K. Luttrell, Winter 2006)
2. Geodetic and photographic survey of permanent scatterers in the Coachella Valley (S. Lyons, Fall 2002)
3. Geodetic survey of Mexicali Valley, Cerro Prieto fault, and Laguna Salada fault (S. Lyons, Spring 2001)
4. Southern Mid-Atlantic Ridge Transit, R/V Nathaniel B. Palmer (J. Stock & S. Cande, Spring 2001)
5. Rapid-static GPS survey of Imperial Valley geodetic network (S. Lyons, Spring 2000)

PUBLICATIONS*

*Note: B. Smith is now B. Smith-Konter

1. Smith-Konter, B., and D.T. Sandwell, Stress evolution of the San Andreas Fault System: Recurrence interval versus locking depth, *Geophys. Res. Lett.*, 36, doi:10.1029/2009GL037235.
2. Smith-Konter, B. and R.T. Pappalardo, Tidally driven stress accumulation and shear failure of Enceladus's tiger stripes, *Icarus*, 198, doi:10.1016/j.icarus.2008.07.005.
3. Sandwell, D. T., and B. Smith, California Earthquakes, *Our Changing Planet: A View from Space*, editors, King, Partington and Williams, 2007
4. Luttrell, K., D.T. Sandwell, B. Smith-Konter, B. Bills, and Y. Bock, Modulation of the earthquake cycle at the southern San Andreas fault by lake loading, *J. Geophys. Res.*, 112, doi:10.1029/2006JB004752, 2007.

5. Wdowinski, S., B. Smith-Konter, Y. Bock, and D. T. Sandwell, Spatial characterization of the interseismic velocity field in southern California, *Geology*, doi:10.1130/G2938A.1, 2007.
6. Smith, B., and D. T. Sandwell, A model of the earthquake cycle along the San Andreas Fault System for the past 1000 years, *J. Geophys. Res.*, 111, doi:10.1029/2005JB003703, 2006.
7. Taesombut, N., X. Wu, A. Chien, A. Nayak, B. Smith, D. Kilb, T. Im, D. Samilo, G. Kent, and J. Orcutt, Collaborative data visualization for Earth sciences with the OptIPuter, *Journal of Future Generation Computing System*, 22, doi:10.1016/j.future.2006.03.023, 2006.
8. Smith, B., Three-dimensional Deformation and Stress Models: Exploring One-Thousand Years of Earthquake History Along the San Andreas Fault System, *Ph.d. Thesis*, University of California San Diego, 2005.
9. Smith, B., and D. T. Sandwell, A 3-D semi-analytic viscoelastic model for time-dependent analysis of the earthquake cycle, *J. Geophys. Res.*, doi:10.1029/2004JB003185, 2004.
10. Smith, B., and D.T. Sandwell, Coulomb stress along the San Andreas Fault System, *J. Geophys. Res.*, 108 (B6), doi:10.1029/2002JB002136, 2003b.
11. Smith, B., and D.T. Sandwell, Accuracy and resolution of Shuttle Radar Topography Mission data, *Geophys. Res. Lett.*, 30 (9), doi:10.1029/2002GL016643, 2003a.
12. Sandwell, D.T., L. Sichiox, and B. Smith, The 1999 Hector Mine earthquake, southern California: Vector near-field displacements from ERS InSAR, *Bull. Seismo. Soc. Am.*, 92, 1341-1354, 2002.
13. Woodney, L.M., M.F.A'Hearn, D.G. Schleicher, T.L. Farnham, J.P. McMullin, M.C.H. Wright, J.M. Veal, L. E. Snyder, I. De Pater, J. R. Forster, P. Palmer, Y. J.Kuan, W. R. Williams, C. C. Cheung, and B. Smith, Morphology of HCN and CN in Comet Hale-Bopp (1995 O1), *Icarus* 157, 193, 2002.
14. Schleicher, D.G., T.L. Farnham, W.R. Williams, B. Smith, and C.C. Cheung, Modeling the rotational morphology of gas and dust jets in Comet Hale-Bopp (1995 O1) At Perihelion, *Bull. Am. Astron. Soc.*, 31, 1128, 1999.

SELECTED ABSTRACTS

1. Smith-Konter, B., J. Olgin, and R.T. Pappalardo (2009), Tidally driven strike-slip fault activity at Encealdus's tiger stripes, *EOS Trans. AGU*, 90 (22), Jt. Assem. Suppl., P33A-02.
2. Konter, J., and B. Smith-Konter (2008), Vizcano: Student development of 3-D volcanic visualizations, *EOS Trans. AGU*, 89 (53), Fall Meet. Suppl., ED21C-07.
3. Smith-Konter, B., T. Solis, and D.T. Sandwell (2008), Data-derived stress uncertainties of the San Andreas Fault System, *EOS Trans. AGU*, 89 (53), Fall Meet. Suppl., U51B-0029.
4. Smith-Konter, B., T. Solis, and D.T. Sandwell (2008), Stress evolution of the San Andreas Fault System: Hindcast stress accumulation models and stress rate uncertainties, *Proceedings from 7th U.S./Japan Natural Resources Panel for Earthquake Research*.
5. Smith-Konter, B., T. Solis, and D.T. Sandwell (2008), Stress uncertainties of the San Andreas Fault System, *Proceedings from the 2008 Southern California Earthquake Center Annual Meeting*, Volume XVIII.

6. Sandwell, D., B. Smith-Konter, and M. Wei (2008), Geodetic imaging of large-scale continental deformation with ALOS InSAR and CGPS, 2008 *GSA Joint Annual Meeting*, 204-6.
7. Sandwell, D., and B. Smith-Konter, Imaging Crustal Deformation along the San Andreas Fault System with ALOS InSAR and GPS, *IGAR Meeting*, 2008.
8. Smith-Konter, B. and R.T. Pappalardo, Tidally Driven Stress Accumulation and Fault Displacements of Enceladus's Tiger Stripes, *EOS Trans. AGU*, 88(52), Fall Meet. Suppl., PFF-06, 2007.
9. Smith-Konter, B. and R.T. Pappalardo, Tidally Driven Stress Accumulation and Shear Failure at Enceladus's Tiger Stripes, *DPS Annual Meeting*, 383, 2007.
10. Smith-Konter, B. and D.T. Sandwell, Are Geodetically and Geologically Constrained Vertical Deformation Models Compatible With the 100-Year Coastal Tide Gauge Record in California?, *EOS Trans. AGU*, Fall Meet. Suppl., 87(52), G21A-08, 2006.
11. Smith-Konter, B., A. Jacobs, K. Lawrence, and D. Kilb, Earthquakes in Action – Incorporating Multimedia, Internet Resources, Large-scale Seismic Data, and 3-D Visualizations into Innovative Activities and Research Projects for Today's High School Students, *EOS Trans. AGU*, Fall Meet. Suppl., 87(52), ED53C-06, 2006.
12. Luttrell, K., D. Sandwell, B. Smith-Konter, and Y. Bock, Modulation of the Earthquake Cycle at the Southern San Andreas Fault by Lake Loading, *EOS Trans. AGU*, Fall Meet. Suppl., 87(52), G43B-0996, 2006.
13. Smith-Konter, B. and D.T. Sandwell, 3D Modeling of Historical Surface Deformation and Stress Accumulation Along the San Andreas and San Jacinto Faults in Southern California, *SCEC Annual Meeting*, 2006.
14. Luttrell, K., D.T. Sandwell, B. Smith-Konter, B. Bills, and Y. Bock, Modulation of the Earthquake Cycle at the Southern San Andreas Fault by Lake Loading, *SCEC Annual Meeting*, 2006.
15. Kilb, D., A. Nayak, and B. Smith, Scientific Visualization and Collaboration Tools Enhance Understanding of Seismological Data, *SSA Meeting*, 2006.
16. Wdowinski, S., B. Smith, Y. Bock, and D. Sandwell, Diffuse Interseismic Deformation Across the North America-Pacific Plate Boundary: Observations and Modeling Results, *EOS Trans. AGU*, Fall Meet. Suppl., U43B-0832, 2005.
17. Smith, B.R., and D.T. Sandwell, Is the Elastic Half-space Dislocation Model Appropriate for Estimating Far-field Velocity, *EOS Trans. AGU*, Fall Meet. Suppl., G53A-0864, 2005.
18. Luttrell, K., D.T. Sandwell, and B.R. Smith, Slip Rate Modulation Caused by Ocean Loading on Glacial Timescales, *EOS Trans. AGU*, Fall Meet. Suppl., G53A-0865, 2005.
19. Smith, B. R., and D. T. Sandwell, Historical Deformation Models of the San Andreas Fault System: Integrating 1000 Years of Earthquake Activity with Modern Deformation Measurements, *EOS Trans. AGU*, Spring Meet. Suppl. 86(18), Jt. Assem. Suppl, G21A-05, 2005. *Invited*
20. Smith, B.R., and D.T. Sandwell, A 3-D Semi-Analytic Viscoelastic Model of the San Andreas Fault System: A 1000-year Perspective of the Earthquake Cycle, *EOS Trans. AGU*, Fall Meet. Suppl., 85(47), G14A-02, 2004.
21. Luttrell, K., B.R. Smith, D.T. Sandwell, and Y. Fialko, Models of Afterslip and Viscoelastic Response following the Landers and Hector Mine Ruptures, *EOS Trans. AGU*, Fall Meet. Suppl., 85(47), G13A-0794, 2004.

22. Smith, B.R., and D.T. Sandwell, A 3-D Semi-Analytic Viscoelastic Model for Time-Dependent Analyses of the Earthquake Cycle: A 1000-year Perspective of the San Andreas Fault System, SCEC Annual Meeting, 2004.
23. Smith, B.R., and D.T. Sandwell, Time-Dependent Coulomb Stress Along the San Andreas Fault System, *EOS Trans. AGU*, 84(46), Fall Meet. Suppl., G31B-0708, 2003.
24. Smith, B.R., and D.T. Sandwell, A 4-D Semi-Analytic Model of Stress Evolution Along the San Andreas Fault System, SCEC Annual Meeting, 2003.
25. Smith, B.R., and D.T. Sandwell, Magnitude of Deviatoric Stress Along the San Andreas Fault, *EOS Trans. AGU, Spring Meet. Suppl.*, EAE03-A-14336, 2003.
26. Smith, B.R., D.T. Sandwell, and B. Bills, Estimating SRTM Resolution for Applications of Fault Offset Recovery, *EOS Trans. AGU*, 83(47), Fall Meet. Suppl., T71E-1221, 2002.
27. Sandwell, D.T., and B.R. Smith, Variations in Normal Stress Along the San Andreas Fault due to Isostatically Compensated Topography, *EOS Trans. AGU*, 82(47), Fall Meet. Suppl., G52A-10, 2001.
28. Smith, B. R., and D. T. Sandwell, Variations in Coulomb Stress Accumulation Along the San Andreas Fault System, *EOS Trans. AGU*, 82(47), Fall Meet. Suppl., G52A-12, 2001. *Invited*
29. Sandwell, D.T., L. Sichoix, and B.R. Smith, Hector Mine Earthquake: Vector Coseismic Displacement from ERS InSAR, *EOS Trans. AGU*, 81(48), Fall Meet. Suppl., S61A-02, 2000.

COLLABORATORS

Bruce Bills (SIO); Yehuda Bock (SIO); A. Chien (UCSD); Zane Crawford (JPL); Robert DeGroot (SCEC); Diane Doser (UTEP); Yuri Fialko (SIO); Ann Gates (UTEP); Eric Hagedorn (UTEP); Jose Hurtado (UTEP); Tom Im (SIO); Graham Kent (SIO); Debi Kilb (SIO); Kristin Lawrence (SIO); Karen Luttrell (SIO); Allison Dinger (SIO); Kate Miller (UTEP); Atul Nayak (SIO); John Orcutt (SIO); Robert Pappalardo (JPL); David Samilo (SIO); David Sandwell (SIO); Laura Serpa (UTEP); Nut Taesombut (UCSD); Aaron Velasco (UTEP); Shimon Wdowinski, (UM); Meng Wei (SIO); X. Wu (UCSD).

GRADUATE ADVISOR: David Sandwell (Scripps Institute of Oceanography, UC San Diego)

POSTDOCTORAL ADVISORS: David Sandwell (Scripps Institute of Oceanography, UC San Diego)

Robert Pappalardo (Jet Propulsion Laboratory, Cal Tech)