

Lara S. Wagner

Assistant Professor
Department of Geological Sciences
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Education

Ph.D. (2005)

University of Arizona, Tucson, AZ

Investigations of upper mantle structure using broadband seismology

Advisor: Susan Beck

B.A. (1996) Cum Laude

Columbia College of Columbia University, New York, NY

Major: History/Sociology

Appointments

Assistant Professor (*January, 2008 - present*)

University of North Carolina at Chapel Hill, Chapel Hill, NC

Visiting Investigator (*January, 2009 - 2011*)

Carnegie Institution of Washington, Washington, DC

Postdoctoral Fellow (*November, 2005 - November, 2007*)

Carnegie Institution of Washington, Washington, DC

Graduate Research Assistant (*2000 - 2005*)

University of Arizona, Tucson, AZ

Research Intern (*2002*)

Lawrence Livermore National Laboratory, Livermore, CA

Research Intern (*2001*)

BP, Houston, TX

Refereed Publications

- L. Wagner**, K. Stewart, K. Metcalf, Crustal scale shortening structures beneath the Blue Ridge Mountains, NC, *Earth and Planetary Science Letters*, submitted 9.19.11
- L. Wagner**, D. Forsyth, D. James, M. Fouch (2010), Two-plane-wave surface wave analysis of upper mantle structure beneath the High Lava Plains, Oregon, *Earth and Planetary Sci. Lett.*, v. 299, pp. 273-284
- Long, M., H. Gao, A. Klaus, and **L. Wagner** (2009), Shear wave splitting and the pattern of mantle flow beneath eastern Oregon, *Earth and Planetary Sci. Lett.*, v. 288, p. 359-369

- L. Wagner**, M. Anderson, J.M. Jackson, S.L. Beck, G. Zandt (2008), Seismic evidence for orthopyroxene enrichment in the continental lithosphere, *Geology* v. 36, p. 935-938
- L. Wagner**, S. L. Beck, G. Zandt, and M. Ducea (2006), Depleted lithosphere, cold, trapped asthenosphere, and frozen melt puddles above the flat slab in central Chile and Argentina, *Earth and Planetary Sci. Lett.*, v. 245, p 289-301
- L. Wagner**, S. L. Beck, and G. Zandt (2005), Upper mantle structure in the south central Chilean subduction zone (30° to 36°S), *Journal Geophys. Res.* 110, B01308, doi:10.1029/2004JB003238
- Giovanni, M. K., S. L. Beck and **L. Wagner** (2002), The June 23, 2001 Peru earthquake and the southern Peru subduction zone, *Geophys. Res. Lett.*, 29(21), 2018, doi:10.1029/2002GL015774

Funded Proposals

- NSF - Geophysics**, \$119,620 (sole PI) *Joint inversion of surface waves and teleseismic body waves to study the formation of the High Lava Plains in Eastern Oregon*, July 15, 2008 - June 30, 2011.
- NSF - Continental Dynamics**, \$225,539(UNC-co PI), \$2,545,967(total) *CAUGHT: Central Andean Uplift and the Geodynamics of High Topography*, June 1, 2009 - May 31, 2013.
- NSF - EarthScope**, \$302,505(UNC-co PI), \$1,174,572(total) *Understanding lithospheric suturing and passive margin development beneath the southeastern U.S.*, January 1, 2010 - June 30, 2014.
- NSF - Geophysics**, \$315,695(UNC-lead PI), \$756,000(total) *Study of the Peruvian flat slab and its effects on the continental lithosphere*, August 1, 2010 - July 31, 2014.

Service

- Committee Member**, *UNC Bicycle and Pedestrian Safety Committee*, 2008 - present
- Journal Club Founder/Organizer**, 2008 - 2011
- IRIS-PASSCAL Standing Committee Member**, 2008 - 2010
- Search Committee Member**, *IRIS-PASSCAL Program Manager position*, February - July 2010
- Executive Committee Member**, *UNC Department of Geological Sciences*, 2009 - 2010
- NBC News 17 Interview**, *Massive Chilean earthquake registered in the Triangle*, March 10, 2010
- Campus Resource/Local Expert**, *BluePrint-UNC, The Daily Southerner, www.uncnews.unc.edu*, Spring, 2010
- Invited Speaker**, *Selecere Haiti Student Fundraising Event*, February 16, 2010
- UNC-BEST, Invited Speaker**, *Symposium on Horizons in Astronomy and Physics Education (SHAPE)*, December 30, 2009

Morehead Planetarium Speaker, *AFTERSHOCKS: The Science of Earthquakes*, February 4, 2010

National Science Foundation Panelist, *NSF-Earthscope*, November, 2009

Invited discussion leader: Early career scientist forum, *Workshop for an Earthscope Science Plan*, October 7-8, 2009

BoD Nominating Committee Member, *Incorporated Research Institutions of Seismology (IRIS)*, Fall 2009

MRI Proposal Co-author, *IRIS-PASSCAL Young Investigator Pool of Instruments (YIPI) MRI proposal*, submitted August, 2009

Organizer, *UNC Department of Geological Sciences Colloquium Series*, 2008 - 2009

Proposal Referee, *NSF-EAR: Geophysics; Earthscope; Petrology and Geochemistry; Instrumentation and Facilities*; 2005 - 2009

Journal Referee, *Geology, Journal of Geophysical Research, Geophysical Journal International, Geophysical Research Letters*

Research Mentor, *Carnegie Summer Internship Program/NSF-REU program*, 2006, 2007

Co-convener, *AGU Special Session, Subduction and Lithospheric Deformation in South America, Fall Meeting*, 2003

Recent Invited Talks

Departmental Colloquium Speaker, UNC-Chapel Hill
September 8, 2011, Seismic constraints on the lithospheric structure of the southeastern United States

Departmental Colloquium Speaker, University of Southern California, Los Angeles, CA
August 29, 2011, Subduction, Extension, and Hot Spots, oh my! New constraints on the genesis of the High Lava Plains, OR

AGU Meeting of the Americas: Foz do Iguassu, Brazil
August 11, 2010, The role of flat slab subduction on the silica enrichment of the continental lithosphere

SSA Annual Meeting: Portland, OR
April 22, 2010, Surface wave constraints on the causes of High Lava Plains volcanism

Morehead Planetarium
February 4, 2010, AFTERSHOCKS: The science of earthquakes

UNC-BEST Symposium on Horizons in Astronomy and Physics Education (SHAPE)
December 30, 2009, The many diverse faces of seismology today

University of Georgia
August 27, 2009, Flat slab subduction in central Chile and Argentina: causes, effects, and broader implications

University of North Carolina at Wilmington
April 17, 2009, Flat slab subduction: causes, effects, and broader implications

National Geophysical Institute of Peru (IGP), Lima, Peru
March 4, 2009, Flat slab subduction: causes, effects, and broader implications

Academic Honors

AGU Outstanding Student Paper Award: Seismology Section
Fall Meeting, 2004

AGU Outstanding Student Paper Award: Tectonophysics Section
Fall Meeting, 2004

Best Overall Talk: 32nd Annual GeoDaze Symposium
University of Arizona, 2004

AGU Outstanding Student Paper Award: Seismology Section
Fall Meeting, 2003

NSF Graduate Student Research Fellow: Awarded 2002

Deans List, Columbia University: Fall 1992, Spring 1993, Spring 1994, Spring 1995, Fall 1995, Spring 1996

Columbia University Chandler Society Research Internship:
May 1993. Awarded to two freshmen annually for outstanding performance in Chemistry