

# Noel M. Bartlow

nbartlow@ku.edu

## POSITIONS

- Assistant Professor** August 2020 - present  
University of Kansas Department of Geology
- Assistant Researcher** June 2018 - August 2020  
UC Berkeley Seismological Lab
- Assistant Professor** Jan. 2016 - May 2018  
University of Missouri Department of Geological Sciences
- John W. Miles Postdoctoral Fellow** Jan. 2014 - Dec. 2015  
UC San Diego Scripps Institution of Oceanography  
Institute for Geophysics and Planetary Physics

## EDUCATION

- Ph.D. Geophysics, Stanford University** Sep. 2008 - Dec. 2013  
*The physics of slow slip, tremor, and associated seismicity from geodetic and laboratory studies*
- B.S. Physics, Carnegie Mellon University** Aug. 2004 - Dec. 2007

## PUBLICATIONS

\* = student advisee

- M. A. L. Walton & L. Staisch, T. Dura, J. K. Pearl, B. Sherrod, J. Gomberg, S Engelhart, A. Tréhu, J. Watt, J. Perkins, R. Witter, **N. Bartlow**, C. Goldfinger, H. Kelsey, A. Morey, V. Sahakian, H. Tobin, K. Wang, R. Wells, and E. Wirth (in revision). Toward an integrative geological and geophysical view of Cascadia subduction zone earthquakes, *Annual Review of Earth and Planetary Sciences*
- Shaddox, H.\* , S. Schwartz, and **N. Bartlow** (in revision). Triggered and Spontaneous Slow Slip Transients on the Anza Segment of the San Jacinto Fault Zone, Southern California, *J. Geophys. Res.*
- Bartlow, N. M.** (2020). A long-term view of Episodic Tremor and Slip in Cascadia, *Geophys. Res. Lett.*, 47, e2019GL085303, doi:10.1029/2019GL085303
- Rousset, B., Y. Fu, **N. Bartlow**, and R. Bürgmann (2019). Weeks-long and years-long slow slip and tectonic tremor episodes on the south-central Alaska megathrust, *J. Geophys. Res.*, doi:10.1029/2019JB018724
- Materna, K.\* , **N. M. Bartlow**, A. Wech, C. Williams, and R. Bürgmann (2019). Dynamically Triggered Changes of Plate Interface Coupling in Southern Cascadia, *Geophys. Res. Lett.*, doi: 10.1029/2019GL084395
- J.R. Murray, **N. Bartlow**, Y. Bock, B. A. Brooks, J. Foster, J. Freymueller, W. C. Hammond, K. Hodgkinson, I. Johanson, A. López-Venegas, D. Mann, G. S. Mattioli, T. Melbourne, D. Mencin, E. Montgomery-Brown, M. H. Murray, R. Smalley, V. Thomas (2019). Regional Global Navigation Satellite System Networks for Crustal Deformation Monitoring, *Seismological Research Letters*, doi:10.1785/0220190
- Yohler, R.\* , **N. M. Bartlow**, L. M. Wallace, and C. Williams (2019). Time-Dependent Behavior of a Near Trench Slow Slip Event at the Hikurangi Subduction Zone, *Geochemistry, Geophysics, Geosystems*, 20, doi:10.1029/2019GC008229.
- Hawthorne, J. C., and **N. M. Bartlow** (2018). Observing and modeling the spectrum of a slow slip event. *J. Geophys. Res.*, doi:10.1029/2017JB015124.

- Wallace, L. M., Y. Kaneko, S. Hreinsdttir, I. Hamling, Z. Peng, **N. Bartlow**, E. D'Anastasio, and B. Fry (2017). Large-scale dynamic triggering of shallow slow slip enhanced by overlying sedimentary wedge. *Nature Geoscience*, 10, 765.
- Wallace, L. M., **N. M. Bartlow**, I. Hamling, and B. Fry (2014). Quake clamps down on slow slip. *Geophys. Res. Lett.*, doi:10.1029/2014GL062367.
- Wech, A. G. and **N. M. Bartlow** (2014). Slip rate and tremor genesis in Cascadia. *Geophys. Res. Lett.*, doi:10.1029/2013GL058607.
- Bartlow, N. M.**, L. M. Wallace, R. J. Beavan, S. Bannister, and P. Segall (2014). Time-dependent modeling of slow slip events and associated seismicity and tremor at the Hikurangi subduction zone, New Zealand. *J. Geophys. Res.*, doi:10.1029/2013JB010609.
- Bartlow, N. M.**, D. Lockner, and N. M. Beeler (2012). Laboratory triggering of stick-slip events by oscillatory loading in the presence of pore fluid with implications for physics of tectonic tremor. *J. Geophys. Res.*, doi:10.1029/2012JB009452.
- Bartlow, N. M.**, S. Miyazaki, A. M. Bradley, and P. Segall (2011). Space-time correlation of slip and tremor during the 2009 Cascadia slow slip event. *Geophys. Res. Lett.*, doi:10.1029/2011GL048714.

## TEACHING EXPERIENCE

Lecturer, <b>EPS 20 Earthquakes in Your Backyard</b> , UC Berkeley	Summer 2019, Summer 2020
Professor, <b>GEOL 8000 Crustal Deformation</b> , University of Missouri	Fall 2017
Professor, <b>GEOL 3350 Structural Geology</b> , University of Missouri	Fall 2016, Fall 2017
Professor, <b>GEOL 1150 Physical Geology</b> , University of Missouri	Spring 2016, Spring 2017
Instructor, <b>Earthquakes, Tsunamis, and Volcanoes</b> , Stanford Education Program for Gifted Youth	Summer 2013
Teaching Assistant, <b>GP 220 Ice Water Fire</b> , Stanford University	Winter 2011
Teaching Assistant, <b>GP 288A Crustal Deformation</b> , Stanford University	Fall 2011
Teaching Assistant, <b>Physics for Engineers I &amp; II</b> , Carnegie Mellon University	Spring 2008, Summer 2008

## STUDENTS

- Heather Shaddox, Ph.D. candidate**, UC Santa Cruz (current co-advisee). Primary Advisor: Susan Schwartz
- Kathryn Materna, Ph.D.** (2019), UC Berkeley (co-advisee). Primary Advisor: Roland Bürgmann
- Ryan Yohler, M.S.**, University of Missouri.
- Nicholas Benz, M.S.**, University of Missouri.
- Amrit Bal**, University of Missouri. Undergraduate Senior Thesis
- Chven Mitchell**, Summer Undergraduate Research in Geoscience and Engineering (SURGE) at Stanford University

## INVITED SEMINARS

Northwestern University	Feb. 2020
University of Kansas	Feb. 2020
University of Illinois	Jan. 2020

University of Texas at Austin DeFord lecture	Nov. 2019
Earthquake Research Institute, University of Tokyo	Sep. 2018
University of California Berkeley Seismological Lab seminar	Feb. 2018
University of California Santa Cruz IGPP seminar	Feb. 2018
University of California Los Angeles EPS dept. seminar	Nov. 2016
Washington University in St. Louis	Nov. 2016
St. Louis University Department of Earth and Atmospheric Sciences	Sep. 2016
University of Missouri Department of Geological Sciences	Nov. 2014
University of Oklahoma School of Geology and Geophysics	Feb. 2014
SIO/UCSD IGPP seminar	Oct. 2013
Victoria University of Wellington, New Zealand	Aug. 2012
USGS Menlo Park Earthquake Science Center seminar series	Oct. 2011
Cascades Volcano Observatory	Jun. 2011

## RECENT MEETING PRESENTATIONS

*(oral, invited)* "Seafloor Geodesy Initiatives", **Subduction Zones in 4D (SZ4D) working group meeting**, Jan. 2020; Albuquerque, NM

*(poster)* "Characterizing Episodic Tremor and Slip in Cascadia", **American Geophysical Union Fall Meeting**, Dec. 2019; San Francisco, CA

*(oral, invited)* "Slow Slip in Cascadia", **Pacific Northwest Earthquake Science Workshop**, Nov. 2019; Seattle, WA

*(oral, invited)* "Recent observations and new frontiers in seafloor geodesy", **Southern California Earthquake Center Annual Meeting**, Sep. 2019; Palm Springs, CA

*(oral)* "Aseismic Slip Phenomena in Southern Cascadia", **Seismological Society of America Annual Meeting**, Apr. 2019; Seattle, WA

*(oral)* "A long-term view of Cascadia slow slip and tremor", **American Geophysical Union Fall Meeting**, Dec. 2018; Washington, DC

*(oral, invited with C. David Chadwell)* "Extending onshore observations offshore and above ground", **Re-examining our Grand Challenges in Geodesy Workshop**, Nov. 2018; East Lansing, MI

*(oral, invited)* "**Properties of Geodetically Detected Slow Slip in Cascadia: slip rates, total slip budget, and temporal patterns**", International Joint Workshop on Slow Earthquakes, Sep. 2018; Fukuoka, Japan

*(oral, invited)* "Combining onshore GPS and offshore pressure data to study the 2014 Gisborne, New Zealand slow slip event", **UNAVCO Science Workshop**, Mar. 2018; Broomfield, CO

*(oral)* "**Slow Earthquake Hunters: A New Citizen Science Project to Identify and Catalog Slow Slip Events in Geodetic Data**", American Geophysical Union Fall Meeting, Dec. 2017; New Orleans, LA

*(oral)* "**Building a catalog of time-dependent inversions for Cascadia ETS events**", American Geophysical Union Fall Meeting, Dec. 2017; New Orleans, LA

## AWARDS

NSF Graduate Research Fellow (GRFP)	2010 - 2013
Gabilan Stanford Graduate Fellow	2009 - 2013
NSF East Asia and Pacific Summer Institutes fellowship, New Zealand	2012
Outstanding Student Paper Award, Seismology section, AGU fall meeting	2010
Mellon College of Science Research Honors, Carnegie Mellon University	2007

## SERVICE and OUTREACH

SZ4D Faulting and Earthquake Cycles Working Group member, 2020 - present  
Co-PI for the Bay Area Regional Deformation (BARD) regional GNSS network  
Science advisor for the Geodetic Alarm System (G-larmS) geodetic earthquake early warning project  
SAGE/GAGE meeting session convener, 2019  
member, USGS Powell Center Cascadia working group  
member, UNAVCO Geodetic Infrastructure Advisory Committee  
Reviewer for *Measuring the Restless Earth: Grand Challenges in Geodesy*  
member, International Association of Geodesy (IAG) inter-commission commission on Marine Geodesy  
USGS Earthquake Hazards program proposal review panelist, 2017  
Speaker, "Megathrust Earthquakes and Tsunamis", public lecture on the Saint Louis Science Center's main stage as part of "Rock Fossil Quake" event, 2016 and 2017  
Earthscope National Meeting planning committee, 2015  
Scripps Institution of Oceanography geodesy seminar organizer, 2014  
Stanford Geophysics Graduate Student Advisory Committee, 2010-2011

## COMPETITIVE GRANT FUNDING

### Current

Agency: National Science Foundation Marine Geology and Geophysics  
Award: \$298,389  
Period: 06/01/2020 - 05/31/2024  
Collaborator: Mark Zumberge, UC San Diego  
Project Title: Collaborative Research: Deployment of Seafloor Optical Fiber Strainmeters for the Detection of Slow Slip Events

Agency: U.S. Geological Survey Earthquake Hazards External Grants Program  
Award: \$51,347  
Period: 01/01/2020 - 12/31/2020  
Collaborator: Kaj Johnson, Indiana University  
Project Title: Bridging the Gap between Locking and ETS in Cascadia using Geodetic Data and Viscoelastic Models: Collaborative Research with Indiana University and University of California - Berkeley

## Prior

Agency: National Science Foundation GeoPRISMS #1551929

Award: \$243,504

Period: 04/01/16 - 03/31/20

Collaborator: Laura Wallace, University of Texas Institute for Geophysics

Project Title: Collaborative Research: Improving models of interseismic locking and slow slip events in Cascadia and New Zealand (*with Laura Wallace, University of Texas*)

Agency: Southern California Earthquake Center

Award: \$30,000

Period: 10/01/2018 - 09/30/2019

Collaborator: Susan Schwartz, UC Santa Cruz

Project Title: 2017 Southern California Earthquake Center proposal: Searching for Transient Aseismic Slip Events on the San Jacinto Fault

Agency: University of Missouri Research Board

Award: \$24,000

Period: 06/01/2017 - 05/31/2018

Project Title: Using strain data to study Episodic Tremor and Slip