

Noel M. Bartlow

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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

PEER REVIEWED PUBLICATIONS

* = student advisee

- Shaddox, H., S. Schwartz, and **N. Bartlow** (2021). Triggered and Spontaneous Slow Slip Transients on the Anza Segment of the San Jacinto Fault Zone, Southern California, *J. Geophys. Res.: Solid Earth* 126, e2021JB022180. <https://doi.org/10.1029/2021JB022180>
- 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 (2021). Toward an integrative geological and geophysical view of Cascadia subduction zone earthquakes, *Annual Review of Earth and Planetary Sciences*, 49, doi:10.1146/annurev-earth-071620-065605
- 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:10.1785/0220190113
- 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. Hreinsdóttir, 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, doi:10.1038/ngeo3021
- Wallace, L. M., **N. M. Bartlow**, I. Hamling, and B. Fry (2014). Quake clamps down on slow slip. *Geophys. Res. Lett.*, doi:10.1002/2014GL062367
- Wech, A. G. and **N. M. Bartlow** (2014). Slip rate and tremor genesis in Cascadia. *Geophys. Res. Lett.*, doi:10.1002/2013GL058607
- 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:10.1002/2013JB010609.
- 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.

OTHER PUBLICATIONS

* = student advisee

- Bartlow, N.**, L. M. Wallace, J. Elliott, and S. Schwartz (2021), Slipping and locking in Earth’s earthquake factories, *Eos*, 102, <https://doi.org/10.1029/2021EO155885>
- Wallace, L. M., **N. Bartlow**, J. Elliott, and S. Schwartz (2021), Subduction megathrust locking and slip behavior: Insights from geodesy, *GeoPRISMS Newsletter*
- Bartlow, N.** (2020), Faults slip slowly in Cascadia. *Tembloor*, <http://doi.org/10.32858/temblor.077>
- Bartlow, N.**, L. Wallace, R. Yohler*, and C. Williams (2018). Slow slip and future earthquake potential in New Zealand and Cascadia, *GeoPRISMS Newsletter*
- Bartlow, N.** (2017). The Importance of Public Funding for Earthquake Hazard Research in Cascadia, Union of Concerned Scientists Blog entry, April 3, 2017

TEACHING EXPERIENCE

<i>Professor</i> , GEOL 791 Advanced Topics in Geology: Inverse Theory for Geoscientists , University of Kansas	Spring 2021, Fall 2022
<i>Professor</i> , GEOL 101 The Way the Earth Works , University of Kansas	Fall 2020, Fall 2021
<i>Professor</i> , GEOL 562 Structural Geology , University of Kansas	Spring 2022
<i>Lecturer</i> , EPS 20 Earthquakes in Your Backyard , UC Berkeley	Summer 2019, Summer 2020
<i>Professor</i> , GEOL 8000 Crustal Deformation , University of Missouri	Fall 2017
<i>Professor</i> , GEOL 3350 Structural Geology , University of Missouri	Fall 2016, Fall 2017
<i>Professor</i> , GEOL 1150 Physical Geology , University of Missouri	Spring 2016, Spring 2017
<i>Instructor</i> , Earthquakes, Tsunamis, and Volcanoes , Stanford Education Program for Gifted Youth	Summer 2013
<i>Teaching Assistant</i> , GP 220 Ice Water Fire , Stanford University	Winter 2011
<i>Teaching Assistant</i> , GP 288A Crustal Deformation , Stanford University	Fall 2011
<i>Teaching Assistant</i> , Physics for Engineers I & II , Carnegie Mellon University	Spring 2008, Summer 2008

ADVISEES

Current

Shannon Fasola, Ph.D., current Postdoctoral Scholar

Saiful Apu, current PhD student

Angikar Roy, current PhD student

Alaura Custard, current undergraduate researcher

Former

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

ERC TECTONIC/FEAR Seminars on Earthquake Physics	Nov. 2022
University of Kansas Department of Physics	Nov. 2022
GeodesY and geoPhysics Seminar of the Upper Midwest (GYPSUM)	Apr. 2021
Indiana University Department of Earth and Atmospheric Sciences	Apr. 2021
University of Washington Seismolunch seminar	Jan. 2021
Harvard University Solid Earth Seminar	Nov. 2020
Northwestern University Department of Earth and Planetary Sciences	Feb. 2020
University of Kansas Department of Geology	Feb. 2020
University of Illinois Department of Geology	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

SELECTED RECENT MEETING PRESENTATIONS

(oral) "Seafloor geodesy and slow slip events in Cascadia", **13th United States-Japan Natural Resources (UJNR) Panel for Earthquake Research**, Sep.. 2022; Anchorage, AK

(oral, invited) "The Spectrum of Fault Slip Behavior in Subduction Zones from Geodetic Observations", **Rock Deformation Gordon Research Conference**, Aug. 2022; Lewiston, ME

(oral, invited) "Seafloor geodesy science targets: Megathrust processes", **Future Directions in Seafloor Geodesy Workshop**, Apr. 2021; virtual

(oral, invited) "Segmentation of Episodic Tremor and Slip (ETS) in Cascadia and the possibility of ETS triggered earthquakes", **American Geophysical Union Fall Meeting**, Dec. 2020; virtual

(oral, invited) "The role of Episodic Tremor and Slip (ETS) in Cascadia: Slip budget, time-dependent behavior, and variability in recurrence, slip, slip rate, depth, and durations of events", **American Geophysical Union Fall Meeting**, Dec. 2020; virtual

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

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

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 PROFESSIONAL ACTIVITIES

Skype a Scientist volunteer	2021 - present
SZ4D Faulting and Earthquake Cycles Working Group member	2020 - 2022
University of Kansas Graduate admissions committee	2020 - 2021
Improving Workplace Climate: Increasing Inclusionary Behaviors in Your Department training participant	2021
Future Directions in Seafloor Geodesy workshop organizing committee	2020 - 2021
Co-PI for the Bay Area Regional Deformation (BARD) GNSS network	2018 - 2020
Science advisor for the Geodetic Alarm System (G-larmS) earthquake early warning project	2018 - 2020
SAGE/GAGE meeting session convener	2019
member, USGS Powell Center Cascadia working group	2019 - 2021
member, UNAVCO Geodetic Infrastructure Advisory Committee	2020 - 2021
Reviewer for <i>Measuring the Restless Earth: Grand Challenges in Geodesy</i>	2019
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: \$76,970

Period: 06/01/2020 - 05/31/2024

Collaborators: Mark Zumberge, UC San Diego; Andrew Newman, Georgia Tech; Spahr Webb, Lamont-Doherty Earth Observatory; David Schmidt, University of Washington; Surui Xie, University of Houston; Donna Charlevoix, UNAVCO

Project Title: Collaborative Research: Near-Trench Community Geodetic Experiment

Agency: National Science Foundation Marine Geology and Geophysics

Award: \$298,389

Period: 01/01/2023 - 12/31/2027

Collaborators: Mark Zumberge, UC San Diego

Project Title: Collaborative Research: Deployment of Seafloor Optical Fiber Strainmeters for the Detection of Slow Slip Events

Prior

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

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