Noel M. Jackson

(formerly 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 and UC Santa Cruz

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 or postdoctoral advisee * = student or postdoctoral co-advisee

Roy, A.* and **Jackson, N.** (in revision). Semi-automated Detection of Dynamically Triggered Coupling Changes: New Insights from Southern Cascadia. *Geophysical Research Letters*.

Melgar, D., A. Thomas, V. Sahakian, P.-E. Share, A. Meigs, H. Tobin, L. Staisch, T. Melbourne, J. Elizabeth, ... **N. M. Jackson**, ... and E. Yenier (in press). The Cascadia Region Earthquake Science Center (CRESCENT): Advancing Understanding of Cascadia's Earthquake Hazards, *Seismological Research Letters*

Fasola, S. L.*, M. R. Brudzinski, and **N. M. Jackson**, and C. A. Williams (2025). Evidence for Far-Field Wastewater Disposal Causing Recent Increases in Seismicity in Central and Northern Kansas, *Seismica*, 4(1). doi: 10.26443/seismica.v4i1.1214

Sherrill, E. M.*, Johnson, K. M., and **Jackson, N. M.** (2024). Locating boundaries between locked and creeping regions at Nankai and Cascadia subduction zones. *Journal of Geophysical Research: Solid Earth*, 129(10), e2024JB029346.

Fasola, S. L.*, **N. M. Jackson**, and C. A. Williams (2023). Deep Short-term Slow Slip and Tremor in the Manawatu Region, New Zealand, *Geophys. Res. Lett.*, 50(21), e2023GL105428. doi: 10.1029/2023GL105428

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. doi: 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. HreinsdÛttir, 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

Hilley, G. E. (ed), Brodsky, E. E. , Roman, D. , Shillington, D. J. , Brudzinski, M. , Behn, M. , Tobin, H. and the **SZ4D RCN** (2022) SZ4D Implementation Plan Stanford Digital Repository Available at https://purl.stanford.edu/hy589fc7561 https://doi.org/10.25740/hy589fc7561

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. *Temblor*, 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

Professor, **GEOL 791 Adv. Top.** or **GEOL 504: Inverse Theory for Geoscientists**, University of Kansas	Sp. 2021, F. 2022, Sp. 2026
Professor, **GEOL 171 Earthquakes & Natural Disasters** and **GEOL 172 Earthquakes & Natural Disasters Laboratory**, University of Kansas	F. 2025, F. 2026
Professor, **GEOL 101 The Way the Earth Works**, University of Kansas	F. 2020, F. 2021, Sp. 2023, Sp. 2025
Professor, **GEOL 103 Geology Fundamentals Laboratory**, University of Kansas	Sp. 2024
Professor, **GEOL 103 Geology Fundamentals Laboratory**, University of Kansas	Sp. 2024
Professor, **GEOL 791 Adv. Top.: Crustal Deformation**, University of Kansas	F. 2024
Professor, **GEOL 562 Structural Geology**, University of Kansas	Sp. 2022
Lecturer, **EPS 20 Earthquakes in Your Backyard**, UC Berkeley	Su. 2019, Su. 2020
Professor, **GEOL 8000 Crustal Deformation**, University of Missouri	F. 2017
Professor, **GEOL 3350 Structural Geology**, University of Missouri	F. 2016, F. 2017
Professor, **GEOL 1150 Physical Geology**, University of Missouri	Sp. 2016, Sp. 2017
Instructor, **Earthquakes, Tsunamis, and Volcanoes**, Stanford Education Program for Gifted Youth	Su. 2013

ADVISEES

Current

Saiful Apu, PhD candidate

Angikar Roy, PhD candidate

Alaura Custard, PhD student

Former

Shannon Fasola, Ph.D., KU Postdoctoral Scholar

Heather Shaddox, Ph.D. (2021), UC Santa Cruz (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

RECENT MEETING PRESENTATIONS

(*oral, invited*) "The hunt for shallow slow slip in Cascadia using seafloor optical fiber strain", **SZNet Ocean Floor Observational Technology Workshop**, *Jan. 2025*; Santiago, Chile

(*oral, invited*) "The hunt for shallow slow slip in Cascadia using seafloor optical fiber strain", **American Geophysical Union Fall Meeting**, *Dec. 2024*; Washington, DC

(*oral, invited*) "Seafloor geodesy and the hunt for shallow slow slip in Cascadia", **NSF SAGE/GAGE Community Science Workshop**, *June 2024*; virtual

(*oral, invited*) "Is there a second shallow slow slip zone in Cascadia?", **American Geophysical Union Fall Meeting**, *Dec. 2023*; San Francisco, CA

(*oral*) "An Updated Episodic Tremor and Slip Catalog for Cascadia", **American Geophysical Union Fall Meeting**, *Dec. 2022*; Chicago, IL

(*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

INVITED SEMINARS AND PRESENTATIONS

Earthscope Webinar	Feb. 2025
University of Oklahoma School of Geosciences Pigott Colloquium	Jan. 2024
NSF Frontiers in Ocean Sciences Symposium	Jul. 2023
University of Kansas Department of Physics Colloquia	Nov. 2022
ERC TECTONIC/FEAR Seminar on Earthquake 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
USGS Cascades Volcano Observatory	Jun. 2011

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

Sectretary, AGU Tectonophysics section	2025 - present
member, Cascadia Region Earthquake Science Center (CRESCENT) Offshore Observations Special Interest Group	2025 - present
Organizer of the Near-Trench Community Geodetic Experiment apply-to-sail program	2023 - present
Earthscope Data Products and Services Advisory Committee member	2023 - present
Co-leader of the Future PIs in Seafloor Geodesy training workshop	2025
Main stage speaker, Enhancing Your Future with Mathematics and Science at Emporia State University	2025
SAGE/GAGE meeting session convener	2019, 2023, and 2025
KU Geology Graduate Studies Committee	2024 - present
Skype a Scientist Live `https://www.youtube.com/watch?v=dfDR8oDoJPg&`)	2022
SZ4D Faulting and Earthquake Cycles Working Group member	2020 - 2022
University of Kansas Geology Graduate admissions committee	2020 - 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
member, USGS Powell Center Cascadia working group	2019 - 2021
member, UNAVCO Geodetic Infrastructure Advisory Committee	2020 - 2021
Reviewer for *Measuring the Restless Earth: Grand Challenges in Geodesy*	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: $227,183
Period: 08/01/2025 - 07/31/2028
Collaborator: Mark Zumberge, UC San Diego
Project Title: Collaborative Research: Follow on to Seafloor Optical Fiber Strainmeters for the Detection of Slow Slip Events in Cascadia

Agency: National Science Foundation Marine Geology and Geophysics
Award: $76,970
Period: 01/01/2023 - 12/31/2027
Collaborators: Mark Zumberge, UC San Diego; Andrew Newman, Georgie 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: 06/01/2020 - 05/31/2026
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