Joshua B. Russell

Lamont-Doherty Earth Observatory
61 Route 9W PO Box 1000
Palisades, NY, 10964
jrussell@ldeo.columbia.edu
jbrussell.github.io

EDUCATION

Columbia University, Graduate School of Arts and Sciences, New York, NY

Ph.D. in progress, Seismology, GPA: 4.0 — Expected 2020

M.Phil., Seismology — 2018

M.A., Seismology — 2017

Master's Thesis: Constraints on radial and azimuthal anisotropy in the central Pacific upper mantle from the NoMelt OBS array

University of Missouri, College of Arts and Sciences, Columbia, MO, — 2011–2015

B.S. Physics *summa cum laude* (minor Mathematics), GPA: 4.0

Senior Thesis: Crustal velocity structure beneath central Anatolia from double-difference travel-time tomography

RESEARCH EXPERIENCE

Graduate Research Fellow, Columbia University — 2015–Present

UNAVCO RESESS Summer Intern — 2014

Project: Using GPS signal-to-noise ratio (SNR) observations to detect and characterize the volcanic plume associated with the 2003 Soufrière Hills Volcano dome collapse

IRIS Summer Intern — 2013

Project: Crustal structure beneath the Ozark Plateau and Illinois Basin using the OIINK Flexible Array

IMSD EXPRESS Research Fellow, University of Missouri — 2011–2015

Project: Earthquake detection near the Central Anatolian Fault Zone using continuous data from the CD-CAT experiment

FELLOWSHIPS & AWARDS

National Science Foundation Graduate Research Fellowship — 2015–2018

Dean's Diversity Fellowship, Columbia University — 2015

Award for Academic Distinction, University of Missouri — 2014

On To the Future (OTF) 2014 GSA travel grant — 2014

Newell S. Gingrich Physics Scholarship — 2013

PUBLICATIONS

- **Russell, J.B.**, Z. Eilon, S. Mosher (In Review). OBSrange: A new tool for the precise remote location of Ocean Bottom Seismometers. *Seismological Research Letters*. PDF
- **Russell, J.B.**, J.B. Gaherty, P.-Y. Lin, D. Lizarralde, J.A. Collins, G. Hirth, R.L. Evans (2019). High-resolution constraints on Pacific upper mantle petrofabric inferred from surface-wave anisotropy. *Journal of Geophysical Research - Solid Earth*. 124, 631657. doi:10.1029/2018JB016598. PDF

CONFERENCE PROCEEDINGS (* = talk)

1. **Russell, J.B.**, J.B. Gaherty (2019). Surface-wave anisotropy of the Eastern North American Margin (ENAM). *GeoPRISMS TEI 2019*, San Antonio, TX.
2. * **Russell, J.B.**, H.F. Mark, J.B. Gaherty, P.-Y. Lin, D. Lizarralde, J.A. Collins, G. Hirth, R.L. Evans (2018). Comprehensive *in situ* constraints on LPO fabric of fast-spreading oceanic lithosphere from seismic anisotropy. *AGU Fall Meeting 2018*, Washington, D.C.
3. Gaherty, J.B., **J.B. Russell**, H.F. Mark, P.-Y. Lin, E.K. Sarafian, Z. Ma, D. Lizarralde, J.A. Collins, G. Hirth, R.L. Evans, C.A. Dalton (2018). A comprehensive portrait of the central Pacific lithosphere-asthenosphere system from NoMelt seafloor geophysical observations. *AGU Fall Meeting 2018*, Washington, D.C.
4. **Russell, J.B.**, J.B. Gaherty, P.-Y. Lin, D. Lizarralde, J.A. Collins, G. Hirth, R.L. Evans (2018). Seismic anisotropy of oceanic lithosphere from OBS noise correlations. *IRIS Workshop 2018*, Albuquerque, NM.
5. **Russell, J.B.**, J.B. Gaherty, P.-Y. Lin, D. Lizarralde, J.A. Collins, G. Hirth, R.L. Evans (2017). NoMelt Experiment: High-resolution constraints on Pacific upper mantle fabric inferred from radial and azimuthal anisotropy. *AGU Fall Meeting 2017*, New Orleans, LA. Poster Abstract: DI43B-0361.
6. Rabinowitz, H.S., A. Barth, **J.B. Russell**, K. Frischkorn, M. Yehudai (2017). Research as Art: Using figures to make science approachable. *AGU Fall Meeting 2017*, New Orleans, LA. Poster Abstract: ED11C-0140.
7. Hung S.-H., P.-Y. Lin, J.B. Gaherty, **J.B. Russell**, G. Jin, J.A. Collins, D. Lizarralde, R.L. Evans, G. Hirth (2017). Seismic Velocity Structure of the Pacific Upper Mantle in the NoMelt Region from Finite-Frequency Traveltime Tomography. *AGU Fall Meeting 2017*, New Orleans, LA. Abstract: S32C-02.
8. **Russell, J.B.**, J.B. Gaherty, P.-Y. Lin, M. Zebker (2017). Constraints on radial and azimuthal anisotropy in the central Pacific upper mantle from the NoMelt OBS array. *OBSIP Symposium 2017*, Portland, ME.
9. Gaherty, J.B., **J.B. Russell**, P.-Y. Lin (2017). Constraints on mantle flow in the oceanic upper mantle from a high-resolution estimate of seismic velocities in the central Pacific. *JpGU-AGU Joint Meeting 2017*, Poster Abstract: SIT25-P04.
10. **Russell, J.B.**, J.B. Gaherty, P.-Y. Lin, M. Zebker (2017). Constraints on radial and azimuthal anisotropy in the central Pacific upper mantle from the NoMelt OBS array. *Earthscope National Meeting 2017*, Anchorage, AK.
11. * **Russell, J.B.**, J.B. Gaherty, P.-Y. Lin, M. Zebker (2016). Constraints on radial anisotropy in the central Pacific upper mantle from the NoMelt OBS array. *AGU Fall Meeting 2016*, Abstract: S14A-05.
12. **Russell, J.B.**, J.B. Gaherty, P.-Y. Lin, G. Jin (2016). Constraints on radial anisotropy in the central Pacific upper mantle from the NoMelt OBS array. *IRIS Workshop 2016*, Vancouver, WA.
13. **Russell, J.B.**, S.L. Beck, N. Turkelli, D. Kalafat, A.A. Ozacar, E.A. Sandvol (2014). Earthquake detection near the Central Anatolian Fault Zone using continuous data from the CD-CAT experiment. *AGU Fall Meeting 2014*, Poster Abstract: S13D-4492.
14. **Russell, J.B.**, J.J. Braun, G.S. Mattioli (2014). Using GPS signal-to-noise ratio (SNR) observations to detect and characterize the volcanic plume associated with the 2003 Soufrire Hills Volcano dome collapse. *2014 GSA Annual Meeting*, Vancouver BC, Canada, Poster Abstract: T233.
15. **Russell, J.B.**, H.J. Gilbert, G. Pavlis (2013). Crustal Structure Beneath the Ozark Plateau and Illinois Basin using the OIINK Flexible Array. *AGU Fall Meeting 2013*, Poster Abstract: T23B-2582.

16. **Russell, J.B.**, H.J. Gilbert, G. Pavlis (2013). Crustal Structure Beneath the Ozark Plateau and Illinois Basin using the OIINK Flexible Array. *American Physical Society (APS) Prairie Section*, University of Missouri, Poster Abstract F1.38.

FIELD EXPERIENCE

Young Pacific ORCA OBS Deployment, South Pacific	April 2018 (4 weeks)
CD-CAT Passive Source Experiment, Central Anatolia, Turkey	June 2015 (2 weeks)
OIINK Passive Source Experiment, Western Kentucky	July 2013 (2 weeks)
IRIS-Passcal Instrumentation Short Course, Socorro, NM	May 2013 (1 week)

TEACHING EXPERIENCE

Quantitative Methods of Data Analysis - Teaching Assistant, rated 4.75/5 — Fall 2017

- *"is great at helping students and goes out of his way to spend time on the concepts that we didn't fully understand in class."*
- *"sat down and spent a few hours helping me debug my code for the final project. He is patient and committed to his duties."*

OUTREACH & SERVICE

Lamont Open House, *Volunteer*	2018
IRIS Diversity Recruitment Lecture Series, *Alumni Speaker*	2017–Present
Brown Scholars, American Museum of Natural History, *Guest Lecturer*	2017, 2018
Research as Art at the Lamont-Doherty Earth Observatory, *Organizer*	2016–Present
New Student Orientation Camping Trip, Columbia University, *Leader*	2016
Girls' Science Day at Columbia University, *Volunteer*	2015

SKILLS

Programming: Python, MATLAB, C, Perl, FORTRAN, GMT, shell scripting, LaTeX
Software: git, SAC, LabVIEW, AutoCAD, Adobe Illustrator

PROFESSIONAL SOCIETIES

American Geophysical Union — 2013–Present