Joshua B. Russell

Lamont-Doherty Earth Observatory
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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

> *Senior 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 APPOINTMENTS

Graduate Research Fellow, Columbia University   2015–Present

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*

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*

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.**, J.B. Gaherty, P.-Y. Lin, D. Lizarralde, J.A. Collins, G. Hirth, R.L. Evans (Submitted). High-resolution constraints on Pacific upper mantle petrofabric inferred from surface-wave anisotropy. *Journal of Geophysical Research - Solid Earth*.

- **Russell, J.B.**, Z. Eilon, S. Mosher (Submitted). OBSrange: A new tool for the precise remote location of Ocean Bottom Seismometers. *Seismological Research Letters*.

CONFERENCE PROCEEDINGS (* = talk)

1. * **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.

2. **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.

3. **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.

4. **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.

5. 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.

6. **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.

7. * **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.

8. **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.

9. **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.

10. **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.

11. **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.

12. **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

- *"Josh 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."*

- *"Josh 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, *Lecturer*	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