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

  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. **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.

4. **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.

5. 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.

6. 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.

7. **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.

8. 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.

9. **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.

10. * **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.

11. **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.

12. **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.

13. **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.

14. **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.

15. **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