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SEPTEMBER 15TH, 2019

EDUCATION

2007-2013	University of California, Berkeley <i>Ph.D. in Earth and Planetary Science, May 2013</i>	Berkeley, CA
2003-2007	Michigan Technological University <i>B.S. in Geological Engineering, May 2007</i>	Houghton, MI

PROFESSIONAL APPOINTMENTS

2019-	University of Texas, Institute for Geophysics Research Science Associate	Austin, TX
2017-2018	University of Texas, Institute for Geophysics <i>Postdoctoral Researcher</i>	Austin, TX
2016	University of Arizona <i>Postdoctoral Researcher</i>	Tucson, AZ
2015-2016	University of Southern California <i>Postdoctoral Researcher</i>	Los Angeles, CA
2013-2015	University of Southern California <i>NSF Postdoctoral Scholar</i>	Los Angeles, CA

VISITING APPOINTMENTS

Summer, 2015	Kobe University, <i>Visiting Researcher</i>	Kobe, Japan
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HONORS AND AWARDS

- AGU 2014 Editor's Citation for Excellence in Refereeing, Geochemistry, Geophysics, and Geosystems
- NSF-EAR Postdoctoral Fellowship Award, 2013-2015
- NSF Graduate Research Fellowship Honorable Mention, 2008

PEER-REVIEWED PUBLICATIONS (UNDERGRADUATE STUDENT^x; GRADUATE STUDENT^{*})

22 Lai, H.^{*}, Garnero, E. J., Grand, S. P., **Porritt, R. W.**, and Becker, T. W., (2019) Global travel time dataset from adaptive empirical wavelet construction. *Geochem., Geophys., Geosys.* doi: 10.1029/2018GC007905

21 Meltzer, A., Beck, S., Ruiz, M., Hoskins, M.^{*}, Soto-Cordero, L.^{*}, Stachnik, J. C., Lynner, C., **Porritt, R. W.**, Portner, D.^{*}, Alvarado, A., Hernandez, S., Yepes, H., Charvis, P., Font, Y., Regnier,

M., Agurto-Detzel, H., Rietbrok, A., Leon-Rios, S., Mercerat, E. D., (2019) The 2016 Pedernales Ecuador, Earthquake: Rapid Response Deployment. *Seismo. Res. Lett.* doi:10.1785/0220180364

20 Martin-Short, R. *, Allen, R. M., Bastow, I., **Porritt, R. W.**, and Miller, M. S., (2018) Seismic Imaging of the Alaska Subduction Zone: Implications for Slab Geometry and Volcanism. *Geochem., Geophys., Geosys.*, 19. doi:10.1029/2018GC007962

19 Harris*, C. W., Miller, M. S., and **Porritt, R. W.**, (2018) Tomographic Imaging of Slab Segmentation and Deformation in the Greater Antilles. *Geochem., Geophys., Geosys.*, 19. doi:10.1029/2018GC007603

18 Lynner, C. L., Beck, S. L., Zandt, G., **Porritt, R. W.**, Lin, F. C., and Eilon, Z. C. (2018), Midcrustal Deformation in the Central Andes Constrained by Radial Anisotropy. *J. Geophys. Res.* doi:10.1029/2017JB014936

17 Miller, M. S., O'Driscoll, L. J., **Porritt, R. W.**, and Roeske, S. M. (2018), Multi-scale crustal architecture of Alaska inferred from P receiver functions. *Lithosphere* 10(2), 267-278, doi:10.1130/L701.1

16 **Porritt, R. W.** & Miller, M. S. (2017), Updates to FunLab, a Matlab based GUI for handling receiver functions. *Computers and Geoscience*, 111, doi: 10.1016/j.cageo.2017.11.022

15 **Porritt, R. W.** & Yoshioka, S. (2017), Evidence of dynamic crustal deformation in Tohoku, Japan, from time-varying receiver functions. *Tectonics*, 36, doi:10.1002/2016TC004413

14 Lynner, C. L. & **Porritt, R. W.** (2017), Crustal structure across the eastern North American margin from ambient noise tomography. *Geophys. Res. Lett.*, 44 (13), 6651–6657, doi:10.1002/2017GL073500.

13 Lippoldt*, R., **Porritt, R. W.**, and Sammis, C. G. (2017), Relating seismicity to the velocity structure of the San Andreas Fault near Parkfield, CA. *Geophys. J. Int.*, 209, 3, 1740-1745, doi:10.1093/gji/ggx131

12 Miller, M. S., O'Driscoll, L. J., Roosmawati, N., Harris*, C. W., **Porritt, R. W.**, Widiyantoro, S., da Costa*, L. T., Soares, E., Becker, T. W., and West, A. J. (2017), Banda Arc Experiment-Transitions in the Banda Arc-Australian Continental Collision. *Seismol. Res. Lett.*, 87, 6, 1417-1423, doi:10.1785/0220160124

11 **Porritt, R. W.**, Miller, M. S., O'Driscoll, L. J., Harris*, C. W., Roosmawati, N., and da Costa*, L. T. (2016), Continent-arc collision in the Banda Arc imaged by ambient noise tomography. *Earth Planet. Sc. Lett.*, 449, 246-258, doi:10.1016/j.epsl.2016.06.011

10 **Porritt, R. W.**, & Yoshioka, S. (2016), Slab pileup in the mantle transition zone and the 30 May 2015 Chichi-jima earthquake. *Geophys. Res. Lett.*, *43* (10), 4905-4912, doi:10.1002/2016GL068168

9 Boyarko*, D. C., Brudzinski, M. R., **Porritt, R. W.**, Allen, R. M., and Trehu, A. M. (2015), Automated detection and location of tectonic tremor along the entire Cascadia margin from 2005 to 2011. *Earth Planet. Sc. Lett.*, *430*, 160-170, doi:10.1016/j.epsl.2015.06.026

8 **Porritt, R. W.**, Miller, M. S., and Darbyshire, F. A. (2015), Lithospheric architecture beneath Hudson Bay. *Geochem. Geophys. Geosy.*, *16* (7), 2262-2275, doi:10.1002/2015GC005845

7 Cheng*, C., Allen, R. M., **Porritt, R. W.**, and Ballmer, M. D. (2015), Seismic constraints on a double-layered asymmetric whole-mantle plume beneath Hawaii. *Hawaiian Volcanoes: From Source to Surface. Geophysical Monograph 208*. Eds: Carey, R., Cayol, V. and Poland, M., 19-34.

6 Maceira, M., Lamat, C., **Porritt*, R. W.**, Higdon, D. M., Rowe, C. A., and Allen, R. M. (2015), On the validation of seismic imaging methods: Finite frequency or ray theory? *Geophys. Res. Lett.*, *42* (2), 323-330, doi:10.1002/2014GL062571

5 **Porritt, R. W.**, Becker, T. W., and Monsalve, G. (2014), Seismic anisotropy and slab dynamics from SKS splitting recorded in Colombia. *Geophys. Res. Lett.*, *41* (24), 8775-8783, doi:10.1002/2014GL061958

4 **Porritt*, R. W.**, Allen, R. M., and Pollitz, F. F. (2014), Seismic imaging east of the Rocky Mountains with USArray. *Earth Planet. Sc. Lett.*, *402*, 16-25, doi:10.1016/j.epsl.2013.10.034

3 Liu*, K., Levander, A., Zhai*, Y., **Porritt*, R. W.**, and Allen, R. M. (2012), Asthenospheric flow and lithospheric evolution near the Mendocino Triple Junction. *Earth Planet. Sc. Lett.*, *323-324*, 60-71, doi:10.1016/j.epsl.2012.01.020

2 **Porritt*, R. W.**, Allen, R. M., Boyarko*, D. C., and Brudzinski, M. R. (2011), Investigation of Cascadia segmentation with ambient noise tomography. *Earth Planet. Sc. Lett.*, *309* (1-2), 67-76, doi:10.1016/j.epsl.2011.06.026

1 Eakin^x, C. M., Obrebski, M., Allen, R. M., Boyarko*, D. C., Brudzinski, M. R., and **Porritt*, R. W.** (2010), Seismic anisotropy beneath Cascadia and the Mendocino triple junction: Interaction of the subducting slab with mantle flow. *Earth Planet. Sc. Lett.*, *297* (3-4), 627-632, doi:10.1016/j.epsl.2010.07.015

AWARDED FUNDING

- NSF-EAR Postdoctoral Fellowship 1249776, June 2013 – September 2015
- Japan Society for the Promotion of Science Postdoctoral Fellowship for Research in Japan (Declined due to conflicts in schedule)

- TexNet collaborative deployment for studying the Eagle Ford (August 2018 – December 2019)

CONFERENCE CONTRIBUTIONS

2018:

Tong, **Porritt**, and Lavier, Controls on megathrust earthquake recurrence inferred from friction modeling and seismic imaging. AGU Fall Meeting, Washington, D.C.

Porritt, Becker, Boschi, and Auer, Mantle structure and dynamics under the continuous United States inferred from tomographic imaging of radially anisotropic shear velocity. AGU Fall Meeting, Washington, D.C.

Porritt, Becker, Auer, and Boschi, Multi-scale mantle structure underneath the Americas from a new tomographic model of seismic shear velocity. Seismological Society of America, Miami, FL.

2017:

Porritt, Becker, Auer, and Boschi, Multi-scale mantle structure underneath the Americas from a new tomographic model of seismic shear velocity. AGU Fall Meeting, New Orleans, LA.

Porritt, Benavides, Becker, and Behr, Preliminary investigation of crustal and transition zone structure in Texas from P to S receiver functions. Earthscope National Meeting, Anchorage, AK

Miller, O'Driscoll, **Porritt**, Harris, da Costa, Soares, and Guterres, Establishing earthquake monitoring in Timor-Leste, SEG

2016:

Lippoldt, **Porritt**, and Sammis, Constraining the velocity structure near the tremorgenic portion of the San Andreas Fault near Parkfield, CA using Ambient Noise Tomography. AGU Fall Meeting, San Francisco, CA

Lynner, Beck, Zandt, Ward, Delph, **Porritt**, Long, and Wagner, Radial anisotropy from ambient noise tomography in the Central Andes. AGU Fall Meeting, San Francisco, CA

Harris, Miller, **Porritt**, and Latchman, Tomographic Mantle Structure of the Eastern Caribbean: Slab Ponding & the Interplay between Rollback, Lithospheric Tearing, and Collision AGU Fall 2016, San Francisco, CA

Porritt, Ward, Porter, Portner, Lynner, Beck, and Zandt, Slab geometry of the South American margin from joint inversion of body waves and surface waves. AGU Fall 2016, San Francisco, CA

Meltzer, Beck, Ruiz, Hernandez, Alvarado, Regnier, Rietbrock, Font, Charvis, Yepes, Lynner, and **Porritt**, Seismicity in the Wake of the April 2016 Pedernales Earthquake, AGU Fall Meeting, San Francisco, CA

Porritt, Miller, O'Driscoll, Harris, Roosmawati, and da Costa, Continent-arc collision in the Banda Arc imaged by ambient noise tomography. IRIS Workshop, Vancouver, Washington.

2006 – 2015:

37 assorted talks and posters

NOTABLE INVITED PRESENTATIONS

Porritt (2017), Towards multi-scale seismic imaging of the Gulf Coast. University of Texas, Institute for Geophysics.

Porritt, Yoshioka, and Miller (2016), The 30 May 2015 Chichi-Jima Earthquake and Slab Pile Up in the Mantle Transition Zone. University of Illinois at Chicago.

Porritt, Miller, and Darbyshire, (2015), Lithospheric Architecture Beneath Hudson Bay. Presented at AGU Fall Meeting, San Francisco, CA

Porritt (2015), Dynamic North America. Invited talk at the Transportable Array Project Team meeting. La Jolla, CA.

Porritt, Miller, and Darbyshire (2015), Lithospheric shear velocity and discontinuity architecture of Hudson Bay. Presented at Earth-Life Science Institute in Tokyo Tech.

Porritt (2013), Integrating Results from USArray to image the dynamic North American cordillera. Geological Society of America full meeting. October 27, 2013, Denver, CO.

Porritt & Allen (2013), The Fragmented Farallon Plate. California Institute of Technology Seismology Seminar. October 11th, 2013. Pasadena, CA

FIELDWORK EXPERIENCE

- I am currently operating a broadband seismic deployment in southeastern Texas to better understand induced earthquakes in the Eagle Ford and the associated velocity structure.
- I have recently deployed a high-resolution, 19 station, broadband seismic line in the Mojave Desert. This project is funded by the Southern California Earthquake Center and permitting was done with the Bureau of Land Management and National Park Service. Deployment was completed in April 2018.
- I participated in the deployment and service of a passive, broadband rapid aftershock experiment in Ecuador following the M7.8 Pedernales earthquake in April 2016.

- I led two service runs for the Banda Arc Imaging Experiment, one in March 2016 and the other in March 2017.
- For the Flexible Array Mendocino Experiment, I was the institutional lead student at Berkeley. My responsibilities included installation, service, and decommission of 30 of the 75 broadband stations. I led teams of undergraduates, fellow graduate students, post-doctoral researchers, and professors through field portions of experiment. Summer 2007 – summer 2009
- For the FlexArray along Cascadia Experiment for Segmentation, I was the institutional lead student at Berkeley. I was responsible for installation, service, and decommission of all 23 broadband stations. I maintained telemetered network operations and acted as remote contact when not in field for service teams. I had the full leadership role of decommission. Fall 2007-summer 2010.
- I designed and implemented a 3 broadband station array at the PASSCAL Instrument Center as a learning experience for IRIS Interns. I had full responsibility of the experiment from conception to station decommission. Summer 2010 and summer 2011.
- I sailed along with a crew from Wood’s Hole Oceanographic Institute on the Oregon State University research vessel, Oceanus as part of the Cascadia Apply to Sail program. I learned basics of Ocean bottom seismometer retrieval and provided outreach for cruise.
- I volunteered with the Picasso Experiment active source portion in Morocco crossing the Atlas Mountains. I worked in close collaboration with Moroccan, Spanish, and American teams to deploy and maintain 16 Texan stations. May 2010
- I volunteered with the Salton Sea Imaging Project. I deployed and redeployed several hundred stations on a rigorous schedule. I gained invaluable skill of off-road driving with a full-size cargo van. March 2011

TEACHING EXPERIENCES

LECTURER

Guest Lecturer	University of Texas, Austin <i>Presented seismic imaging methods for Prof. Behr</i>	Spring 2017
Co-Lecturer	University of Arizona <i>Natural Hazards and Social Justice with Prof. Richardson</i>	Fall 2016
Guest Lecturer	University of Arizona <i>Presented seismic imaging methods for Prof. Beck</i>	Fall, 2016

Guest Lecturer University of Southern California Fall, 2015
Presented numerical seismology for Prof. Becker

Guest Field Instructor University of California, Los Angeles Spring 2014
Led field team of undergraduates in a gravity survey

Guest Lecturer University of Southern California Fall 2013
Presented fundamentals of seismology for Prof. Miller

TEACHING ASSISTANT

UC Berkeley
EPS20: Earthquakes in your backyard Fall, 2012
EPS122: Physics of the earth and planetary interiors Fall, 2009
EPS39: Undergraduate Field Experience Spring 2008-Fall, 2009

Michigan Technological University
Mathlab Consultant Spring 2005-2007
Fundamental Geology Lab Fall 2006 - 2007

MENTORING

Undergraduate Research University of Texas, Austin Summer 2017
UT Catalyst Program

Undergraduate Research University of Southern California Summer 2014
IRIS Internship Program

COMMUNITY OUTREACH

Marine Field Assistant University of Texas, Austin May 2017
UT Marine Geology and Geophysics

Internship Alumni Mentor IRIS Summer 2009-2011
IRIS Internship Program

USArray Short Course Northwestern University Fall 2010-2016
Lecturer, Software Debugger, and Teaching Assistant

PROFESSIONAL AFFILIATIONS

- American Geophysical Union
- European Geoscience Union
- Japanese Geoscience Union
- Seismological Society of America

SYNERGISTIC ACTIVITIES

- AGU Fall 2018, session convener and co-chair, Mountain building in Collisional and Cordilleran Orogenic Systems I-III
- AGU Fall 2015, session convener and co-chair, Seismic Anisotropy across Scales in the Mantle I,II
- Rob Porritt, Simple Broadband Processing in Matlab. IRIS educational resources website: http://www.iris.edu/hq/resource/bb_processing_matlab
- Rob Porritt, GMT Tutorial. IRIS educational resources website: http://www.iris.edu/hq/resource/gmt_tutorial
- GeoPRISMS – Earthscope Planning Workshop for the Cascadia Primary Site; session scribe, Spring 2012
- AGU Fall 2015, Outstanding Student Presentation Awards Judge
- AGU Fall 2014, Outstanding Student Presentation Awards Judge
- Journal reviewer for: *Geophys. J. Int.*, *Earth Planet. Sc. Lett.*, *Geochem.*, *Geophys.*, *Geosys.*, *Solid Earth*, *Geosphere*, *Phys. Earth Planet. In.*
- Proposal reviewer for: National Science Foundation (Geophysics, EarthScope)