

## CURRICULUM VITAE: ERIC DANIEL KISER

### Chronology of Education

Harvard University

Ph.D. in Earth and Planetary Sciences, May 2012

*Advisor:* Miaki Ishii

*Dissertation:* Earthquake characteristics as imaged by the back-projection method.

University of Illinois

B.S. with Honors in Geology, August 2007

*Advisor:* Jay Bass

*Senior thesis:* Study of the sound velocities of Wollastonite and Epidote using single-crystal Brillouin spectroscopy measurements.

### Chronology of Employment

University of Arizona, Department of Geosciences

Assistant Professor, August 2016-present

Rice University, Department of Earth Science

Postdoctoral Research Associate, July 2012-July 2016

### Publications

Wang R., Schmandt B., Zhang M., Glasgow M., **Kiser E.**, Rysanek S., and Stairs R., 2020. Injection-induced earthquakes on complex fault zones of the Raton Basin illuminated by machine-learning phase picker and dense nodal array, *Geophys. Res. Lett.*, **47**, 14.

\*Kehoe H., and **Kiser E.**, 2020. Evidence of a supershear transition across a fault stepover, *Geophys. Res. Lett.*, **47**, 10.

Ulberg C., Creager K., Moran S., Abers G., Thelen W., Levander A., **Kiser E.**, Schmandt B., Hansen S., and Crosson R., 2020. Local source Vp and Vs tomography in the Mount St. Helens region with the iMUSH broadband array, *Geochem. Geophys. Geosy.*, **21**, 3.

**Kiser E.**, Levander A., Zelt C., Schmandt B., and Hansen S., 2019. Upper crustal structure and magmatism in southwest Washington: Vp, Vs, and Vp/Vs results from the iMUSH active-source seismic experiment, *J. Geophys. Res.*, **124**, 7, 7067-7080.

Chen M., Manea V., Niu, F., Wei S., and **Kiser E.**, 2019. Genesis of intermediate-depth and deep intraslab earthquakes beneath Japan constrained by seismic tomography, seismicity, and thermal modeling, *Geophys. Res. Lett.*, **46**, 4, 2025-2036.

\*Kehoe H., **Kiser E.**, and Okubo P., 2019. The rupture process of the 2018 Mw 6.9 Hawai'i earthquake as imaged by a genetic algorithm-based back-projection technique, *Geophys. Res. Lett.*, **46**, 5, 2467-2474.

**Kiser E.**, Levander A., Zelt C., Schmandt B., and Hansen S., 2018. Focusing of melt near the top of the Mount St. Helens (USA) magma reservoir and its relationship to major volcanic eruptions, *Geology*, **46**, 9, 775-778.

Ulberg C., Abers G.A., Bachmann O., Bedrosian P., Blatter D.L., Bowles-Martinez E., Clynne M.A., Creager K.C., Crosbie K., Denlinger R.P., Glasgow M.E., Han J., Hansen S.M., Hill G.J., **Kiser E.**, Levander A., Mann M., Meng X., Moran S., Peacock J., Schmandt B., Schultz A., Sisson T., Castaneda R., Thelen W., Vidale J.E., and Wanke M., 2017. Imaging Magma Under Mount St. Helens with Geophysical and Petrologic Methods, *GeoPRISMS Newsletter*, 39.

**Kiser E.**, and Ishii M., 2017. Back-projection imaging of earthquakes, *Annu. Rev. Earth Planet. Sci.*, **45**, doi:10.1146/annurev-ear-063016-015801.

- Hansen S.M., Schmandt B., Levander A., **Kiser E.**, Vidale J., Abers G., and Creager K., 2016. Seismic evidence for a cold serpentinitized mantle wedge beneath Mount St. Helens, *Nat. Commun.*, 7, doi:10.1038/ncomms13242.
- Kiser E.**, Palomeras I., Levander A., Zelt C., Harder S., Schmandt B., Hansen S., Creager K., and Ulberg C., 2016. Magma reservoirs from the upper crust to the Moho inferred from high-resolution Vp and Vs models beneath Mount St. Helens, *Geology*, **44**, 6, 411-414.
- Kiser E.**, and Ishii M., 2013. Hidden aftershocks of the 2011 Mw 9.0 Tohoku, Japan earthquake imaged with the backprojection method. *J. Geophys. Res.*, doi:10.1002/2013JB010158.
- Kiser E.**, and Ishii M., 2013. The 2010 Maule, Chile, coseismic gap and its relationship to the 25 March 2012 Mw 7.1 earthquake. *Bull. Seismol. Soc. Am.*, **103**, doi:10.1785/0120120209.
- Ishii M., **Kiser E.**, and Geist E.L., 2013. Mw 8.6 Sumatran earthquake of 11 April 2012: Rare seaward expression of oblique subduction. *Geology*, **41**, 319-322.
- Kiser E.**, and Ishii M., 2012. The March 11, 2011 Tohoku-oki earthquake and cascading failure of the plate interface. *Geophys. Res. Lett.*, **39**, doi:10.1029/2012GL051170.
- Kiser E.**, and Ishii M., 2012. Combining seismic arrays to image the high-frequency characteristics of large earthquakes. *Geophys. J. Int.*, **188**, 3, 1117-1128.
- Kennett B.L.N., Gorbатов A., and **Kiser E.**, 2011. Structural controls on the Mw 9.0 2011 Offshore-Tohoku earthquake. *Earth Planet. Sci. Lett.*, **310**, 462-467.
- Kiser E.**, and Ishii M., 2011. The 2010 Mw 8.8 Chile earthquake: Triggering on multiple segments and frequency-dependent rupture behavior. *Geophys. Res. Lett.*, **38**, L07301, doi:10.1029/2011GL047140.
- Kiser E.**, Ishii M., Langmuir C. H., Shearer P. M., and Hirose H., 2011. Insights into the mechanism of intermediate-depth earthquakes from source properties as imaged by back projection of multiple seismic phases, *J. Geophys. Res.*, **116**, B06310, doi:10.1029/2010JB007831.
- Kiser E.**, and Ishii M., 2010. Modeling the 2010 Chile Earthquake Rupture with USArray. *inSights: the Earthscope newsletter*.

## Work in Progress

- \*Dunham A., and **Kiser E.**, 2020. Local earthquake tomography of the central Oregon forearc using a large-N, short duration, nodal array, In Review.
- Wang R., Schmandt B., and **Kiser E.**, 2020. Seismic discrimination of controlled explosions and earthquakes near Mount St. Helens using P/S ratios, In Review.
- Kiser E.**, \*Kehoe H., Chen M., and Hughes A., 2020. Conjugate faulting, lower mantle seismicity, and slab settling associated with the 2015 Bonin Islands deep-focus earthquake, In Review.
- Kiser E.**, Levander A., Schmandt B., and Hansen S., 2020. Seismic evidence of bottom-up crustal control on volcanism and magma storage near Mount St. Helens, In Review.

\* graduate student

## Awarded Grants

Large landslides and landslide/glacier-dammed Himalayan and Karakoram rivers and the potential for transboundary disruptions. NASA NSPIRES Program.

Collaborative Research: Exploring the nature of deep-focus earthquakes in the Japan, Kuril, and Izu-Bonin subduction zones. NSF Geophysics Program.

Collaborative Research: TransANdean Great Orogeny (TANGO), NSF FRES Program.