

HELEN A. JANISZEWSKI

Assistant Professor

Department of Earth Sciences | SOEST | University of Hawai'i at Mānoa | Honolulu, HI, USA

HISTORY OF EMPLOYMENT

Assistant Professor

Department of Earth Sciences, University of Hawai'i at Mānoa, Honolulu, HI, USA

2019 – present

Postdoctoral Fellow

Department of Terrestrial Magnetism, Carnegie Institution for Science, Washington, DC, USA

2017 – 2019

DEGREES

Columbia University, New York, NY, USA

Ph.D. in Seismology (2018)

M.Phil. in Seismology (2016)

M.A. in Seismology (2014)

Rutgers University, New Brunswick, NJ, USA

B.S. in Geological Sciences (Highest Honors) and Physics, summa cum laude (2012)

RESEARCH EXPERIENCE

My research uses seismic imaging to investigate the structure and dynamics of tectonic plate boundaries, with emphasis on subduction zones, volcanic arc systems, and crustal magma storage. I lead projects that integrate land and seafloor observations, and I have a sustained focus on developing methods and infrastructure for broadband ocean-bottom seismic (OBS) data analysis, as well as complementary seafloor geophysical instrumentation.

I have active research projects involving graduate students focused on seismic imaging in the Alaska-Aleutian subduction zone and across Kīlauea in Hawai'i, including active collaborations with USGS scientists at the Hawaiian and Alaska Volcano Observatories. I am also a collaborator on an initiative to develop SMART subsea cable infrastructure for geophysics, extending my expertise in seafloor seismology to novel instrumentation.

I have significant experience across multiple community science initiatives, most notably in several roles within Subduction Zones in 4 Dimensions (SZ4D), and on advisory and operations committees spanning marine seismology infrastructure and subduction zone geophysical observatories.

REPRESENTATIVE PUBLICATIONS

Janiszewski, H. A., J. B. Russell (2025). Ambient Noise Analyses at Broadband Ocean Bottom Seismometers: Data Quality and Transfer Function Corrections. *Seismological Research Letters*.

Hua, J., S. P. Grand, T. W. Becker, H. A. Janiszewski, C. Liu, D. T. Trugman, H. Zhu (2025). Seismic imaging of active cratonic thinning beneath North America consistent with slab-induced dripping. *Nature Geoscience*.

- Janiszewski, H. A., N. Bennington, J. Wight (2024). A Seismic Nodal Deployment to Understand Magmatic Structure in the Vicinity of the Pāhala Earthquake Swarm. *Seismological Research Letters*, 95(5), 3082–3092.
- Janiszewski, H. A., Z. Eilon, J. B. Russell, B. Brunsvik, J. B. Gaherty, S. Mosher, W. Hawley, S. Coats (2023). Broad-Band Ocean Bottom Seismometer Noise Properties. *Geophysical Journal International*, 233, 297–315.
- Howe, B. M., M. Angove, J. Aucan, et al. [incl. H. A. Janiszewski] (2022). SMART Subsea Cables for Observing the Earth and Ocean, Mitigating Environmental Hazards, and Supporting the Blue Economy. *Frontiers in Earth Science*, 9.
- Janiszewski, H. A., L. S. Wagner, D. C. Roman (2020). Aseismic mid-crustal magma reservoir at Cleveland Volcano imaged through novel receiver function analyses. *Scientific Reports*, 10, 1780.
- Janiszewski, H. A., J. B. Gaherty, G. A. Abers, H. Gao, Z. Eilon (2019). Amphibious surface wave phase velocity measurements of the Cascadia subduction zone. *Geophysical Journal International*, 217(3), 1929–1948.
- Till, C. B., A. Kent, G. A. Abers, H. A. Janiszewski, J. B. Gaherty, B. Pitcher (2019). The Causes of Spatiotemporal Variations in Erupted Fluxes and Compositions Along a Volcanic Arc. *Nature Communications*, 10(1).
- Janiszewski, H. A., G. A. Abers (2015). Imaging the plate interface in the Cascadia seismogenic zone: New constraints from offshore receiver functions. *Seismological Research Letters*, 86(5), 1261–1269.
- Janiszewski, H. A., G. A. Abers, D. J. Shillington, J. A. Calkins (2013). Crustal structure along the Aleutian island arc: New insights from receiver functions constrained by active source data. *Geochemistry, Geophysics, Geosystems*, 14, 2977–2992.

HONORS AND AWARDS

- Faculty Research Travel Grant, UHM Office of the Vice President for Research and Scholarship (2023)
- Outstanding Reviewer, *Geophysical Journal International* (2021)
- Carnegie Institution for Science, DTM Postdoctoral Fellowship (2017–2019)
- AGU Outstanding Student Presentation Award, Tectonophysics (2016)
- GeoPRISMS Student AGU Prize, Honorable Mention (2015, 2016)
- National Science Foundation Graduate Research Fellowship (2012–2015)

PROFESSIONAL SOCIETY MEMBERSHIPS

- American Geophysical Union (AGU)
- Seismological Society of America (SSA)