

XIAOZHUO WEI

email

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APPOINTMENT

2023 – Now Barr's Foundation Postdoctoral Fellow
Seismological Laboratory, California Institute of Technology

EDUCATION

2017 – 2023 Doctor of Philosophy, Geological Oceanography
Graduate School of Oceanography, University of Rhode Island

2014 – 2017 Master of Science, Geophysics
Institute of Geology and Geophysics, Chinese Academy of Sciences

2010 – 2014 Bachelor of Science, Geophysics
School of Earth and Space Science, Peking University

PUBLICATIONS

X. Wei, Y. Shen (2023), Comment on "Seismic Velocity Variations at Different Depths Reveal the Dynamic Evolution Associated With the 2018 Kilauea Eruption" by Liu et al., *Geophys. Res. Lett.*, doi: 10.1029/2022GL102596.

X. Wei, Y. Shen, and J. K. Morgan (2023), Shallow volcano-tectonic structures on the Island of Hawai'i imaged by multimode Rayleigh wave ambient noise tomography, *J. Geophys. Res. Solid Earth*, doi: 10.1029/2022JB026244.

B. He, X. Wei, M. Wei, Y. Shen, M. Alvarez, and S. Schwartz (2023), A shallow slow slip event in 2018 in the Semidi segment of the Alaska subduction zone detected by machine learning, *Earth Planet. Sci. Lett.*, 612: 118154, doi: 10.1016/j.epsl.2023.118154.

X. Wei, Y. Shen (2022), P waves emerged from ambient noise cross-correlation post the 2018 Kilauea eruption revealing middle crust velocity discontinuities beneath the Island of Hawai'i, *Geophys. Res. Lett.*, 49(16): e2022GL098470, doi: 10.1029/2022GL098470.

X. Wei, Y. Shen, J. Caplan-Auerbach, and J. K. Morgan (2022), An improved earthquake catalog during the 2018 Kilauea eruption from combined onshore and offshore seismic arrays, *Earth Space Sci.*, 9(6): e2021EA001979, doi: 10.1029/2021EA001979.

X. Wei, Y. Shen, J. Caplan-Auerbach, and J. K. Morgan (2021), An OBS array to Investigate the Offshore Seismicity during the 2018 Kilauea Eruption, *Seismol. Res. Lett.*, 92(1): 603-612, doi:10.1785/0220200206.

X. Z. Wei, M. Jiang, L. Chen, X. Wang (2018), New VDSS method based on dense linear array and its applications, *Prog. in Geophys.* (in Chinese with English abstract), 33(3): 986-992, doi: 10.6038/pg2018BB0201.

X. Wei, M. Jiang, X. Liang, L. Chen, and Y. Ai (2017), Limited southward underthrusting of the Asian lithosphere and material extrusion beneath the northeastern margin of Tibet, inferred from teleseismic Rayleigh wave tomography, *J. Geophys. Res. Solid Earth*, 122(9): 7172-7189, doi:10.1002/2016JB013832.

M. Wang, Q. Liu, S. Nie, B. Li, Y. Wu, J. Gao, X. Wei, and X. Wu (2015), High-pressure Phase transitions and compressibilities of aragonite-structure carbonates: SrCO₃ and BaCO₃, *Phys. Chem. Miner.*, 42: 517-527, doi: 10.1007/s00269-015-0740-2.

ARTICLES IN PREPARATION

X. Wei, Y. Shen, Anisotropic ambient noise tomography of the Island of Hawai'i, **in prep.**

X. Wei, Y. Shen, F.-C. Lin, and J. Farrell, Imaging the magma pathway under Kilauea's lower East Rift Zone, **in prep.**

MEETING ABSTRACTS

X. Wei, Y. Shen, F.-C. Lin, and J. Farrell (2023), Finite-frequency P-wave tomography reveals a magma

mush zone beneath the nodal networks across the Kīlauea Lwoer East Rift Zone, AGU Fall Meeting. (eLightening)

X. Wei, Y. Shen (2023), Teleseismic P wave travel times on dense nodal networks across the Kīlauea East Rift Zone reveal two high-speed intrusive cores, SSA Annual Meeting. (Oral)

X. Wei, Y. Shen (2022), P waves emerged from ambient noise cross-correlation post the 2018 Kīlauea eruption revealing middle crust velocity discontinuities beneath the Island of Hawai'i, AGU Fall Meeting. (Oral)

X. Wei, Y. Shen (2022), The volcanic unrest of Lō'ihi in 2017: Preliminary results from repeated bathymetric mapping and more complete and relocated earthquake catalog, AGU Fall Meeting. (Poster)

Y. Shen, X. Wei (2022), Strong radial anisotropic structures yield new constraints on the volcanic processes on the Island of Hawai'i, AGU Fall Meeting. (Poster)

M. Wei, B. He, X. Wei, Y. Shen, and M. Alvarez (2022), Use machine learning to detect tectonic movement in seafloor pressure data for seismic and tsunami hazard assessment, AGU Fall Meeting. (Oral, invited)

X. Wei, Y. Shen (2022), An Improved Earthquake Catalog from the Alaska Amphibious Community Seismic Experiment (AACSE), SSA Annual Meeting. (Poster)

X. Wei, Y. Shen (2022), Fundamental and First Higher Mode Rayleigh Wave Ambient Noise Tomography on the Island of Hawai'i, SSA Annual Meeting. (Poster)

X. Wei, Y. Shen (2021), The initiation of the 2018 Kīlauea eruption: a perspective from seismicity, AGU Fall Meeting. (Oral)

X. Wei, Y. Shen (2021), First overtone Rayleigh wave observed from ambient noise cross-correlation on the Island of Hawai'i, AGU Fall Meeting. (eLightening)

He, B., X. Wei, M. Wei, Y. Shen, M. Alvarez (2021), A likely slow slip event detected by seafloor pressure data offshore southwest Alaska in 2018, AGU Fall Meeting. (Oral)

X. Wei, Y. Shen, J. Caplan-Auerbach, and J. K. Morgan (2020), An improved earthquake catalog during the 2018 Kīlauea eruption from combined onshore and offshore seismic arrays, AGU Fall Meeting. (Poster)

X. Wei, Y. Shen, J. Caplan-Auerbach, and J. K. Morgan (2019), Seismicity of the Kīlauea Submarine South Flank Following the 2018 Eruption and Mw 6.9 Earthquake, AGU Fall Meeting. (Oral, invited)

X. Wei, Y. Shen, X. Bao, L. Chen, and M. Jiang (2018), Is it possible to use teleseismic scattered waves to determine the receiver-side stochastic velocity model?, AGU Fall Meeting. (Poster)

X. Wei, M. Jiang, X. Liang, L. Chen, and Y. Ai (2016), Limited southward underthrusting of the Asian lithosphere and material extrusion beneath the northeastern margin of Tibet, inferred from teleseismic Rayleigh wave tomography, AGU Fall Meeting. (Poster)

INVITED SEMINARS & TALKS

2024.02.29	SZ4Grads Spring Webinar Series
2023.04.12	Department of Ocean Science and Engineering Seminar Southern University of Science and Technology
2023.03.30	Geophysics Brown Bag Seminar, California Institute of Technology
2022.11.02	Geology & Geophysics Department Seminar, Woods Hole Oceanographic Institution

AWARDS & SCHOLARSHIP

2023 – 2025	Barr's Foundation Postdoctoral Fellowship, Division of Geology and Planetary Sciences, California Institute of Technology
2023	Travel Support, 2023 GAGE/SAGE Community Science Workshop,

	EarthScope Consortium
2022	Thomas & Kathy J. McNiff Graduate Student Endowment in Marine Science Scholarship, Graduate School of Oceanography, University of Rhode Island
2022	Annual Meeting Travel Grant, Seismological Society of America
2019	Robert L. McMaster Endowment Scholarship, GSO, URI
2019 & 2023	Alumni Travel Award, GSO, URI
2016	Sakura Exchange Program Travel Award, Earthquake Research Institute, University of Tokyo
2014 – 2017	Academic Scholarship, Chinese Academy of Sciences
2013	Academic Excellence Award, Peking University

TEACHING

2021 Fall	Teaching Assistant, University of Rhode Island OCG 108: Living by the Ocean Grading homework and exams. Giving lectures about the plate tectonics.
2020 Spring	Teaching Assistant, University of Rhode Island OCG 440 & 540: Geological Oceanography Organizing lab sessions twice a week. Grading lab reports and exams.
2019 Fall	Teaching Assistant, University of Rhode Island OCG 131: Volcanoes Grading homework and exams. Giving lectures when the teaching professor is away.

SERVICES

2023 – Now	Reviewer, Tectonophysics, JGR: Solid Earth
2019 – 2020 & 2022	Marine Geology and Geophysics Lecture Organizer, GSO
2022	Student Volunteer, AGU Fall Meeting
2020	Primary Convener, AGU Fall Meeting

PUBLIC OUTREACH

2021.09 & 2022.09	Volunteer, Science Saturday, GSO Setting up a Raspberry Shake seismometer alongside a volcano eruption experiment site to demonstrate volcano monitoring.
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FIELDWORK & CRUISE EXPERIENCE

2023.10 & 12	Temporary Nodal Seismic Array Experiment San Fernando Valley, California, US (2 days)
2023.10	Active Source Survey with existing DAS Ridgecrest, California, US (2 days)
2023.01	Investigation of Hydrothermal Vents R/V Kilo Moana and ROV Jason/Medea, Hawai'i, US (1 week)
2018.09-10	Active & Passive Source Marine Seismic Experiment R/V Langseth, Hawai'i, US (7 weeks)
2015.12 & 2016.03	Temporary Broadband Seismic Array Experiment Inner Mongolia & Heilongjiang province, China (6 weeks)