XIAOZHUO WEI

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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 Kīlauea 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 Kīlauea 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 Kīlauea 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: $SrCO_3$ and $BaCO_3$, 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 Kīlauea'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 Lower 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

2024	Travel Support, Workshop on Mantle Magma Supply and Imaging Magmatic Systems, SZ4D
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

2023.05-08 Mentor, Earthquake Fellow program, Seismological Laboratory, California Institute of Technology
Mentoring local high school students to hence their understanding of seismology and to perform their own small research projects using their own Raspberry Shake seismometers.

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

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)

June 17, 2024