

Haiyang Liam Kehoe

Contact	U.S. Geological Survey Geologic Hazards Science Center 1711 Illinois Street Golden, CO 80401	520-222-8912 hkehoe@usgs.gov https://seismolo.gy
Research Appointments	U.S. Geological Survey Mendenhall Postdoctoral Fellow	Golden, CO 2023–Present
	U.S. Geological Survey Student Trainee (Physical Science) Supervisors: Sean Ahdi and Morgan Moschetti	Golden, CO 2021–2023
Education	University of Arizona <i>Ph.D. Geosciences</i> Advisor: Eric Kiser	Tucson, AZ 2023
	University of California, San Diego <i>B.S. Physics</i> Advisors: Subrata Chakraborty and Mark Thiemens	La Jolla, CA 2017
Publications	<ol style="list-style-type: none">5. Kehoe, H. L. & E. D. Kiser (2024). Moment-dependent rupture properties of deep-focus earthquakes in the Izu-Bonin subduction zone. <i>Geophysical Journal International</i>, 237 (2), 663–678. https://doi.org/10.1093/gji/ggae0624. Kiser, E. D. & H. L. Kehoe (2021). The hazard of coseismic gaps: the 2021 Fukushima earthquake. <i>Geophysical Journal International</i>, 227 (1), 54–57. https://doi.org/10.1093/gji/ggab2083. Kiser, E. D., H. L. Kehoe, M. Chen, & A. N. Hughes (2021). Lower Mantle Seismicity Following the 2015 M_w 7.9 Bonin Islands Deep-Focus Earthquake. <i>Geophysical Research Letters</i>, 48 (13), e2021GL093111. https://doi.org/10.1029/2021GL0931112. Kehoe, H. L. & E. D. Kiser (2020). Evidence of a Supershear Transition Across a Fault Stepover. <i>Geophysical Research Letters</i>, 47 (10), e2020GL087400. https://doi.org/10.1029/2020GL0874001. Kehoe, H. L., E. D. Kiser, & P. G. Okubo (2019). The Rupture Process of the 2018 M_w 6.9 Hawai'i Earthquake as Imaged by a Genetic Algorithm-Based Back-Projection Technique. <i>Geophysical Research Letters</i>, 46 (5), 2467–2474. https://doi.org/10.1029/2018GL080397	
Invited Seminars	<ol style="list-style-type: none">2. Kehoe, H. L. (2022). Improved Constraints on Back-Projection Source Models Using Algorithmic Seismic Array Design. Invited oral presentation at the <i>University of Utah SeismoTea Seminar</i>, Salt Lake City, UT.1. Kehoe, H. L. (2022). Improved Constraints on Back-Projection Source Models Using Algorithmic Seismic Array Design. Invited oral presentation at the <i>Lawrence Livermore National Laboratory</i>, Livermore, CA.	
Conference Abstracts	<ol style="list-style-type: none">17. Ahdi, S. K., H. L. Kehoe, W. J. Stephenson, O. S. Boyd, M. P. Moschetti, N. S. Lindberg, & T. L. Pratt (2023). Assessing Site Characterization in Puerto Rico: Towards the 2025 Update of the Puerto Rico and Virgin Islands Portion of the USGS National Seismic Hazard Model. Oral presentation at the <i>Seismological Society of America Annual Meeting</i>, San Juan, PR.	

16. **Kehoe, H. L.**, E. D. Kiser (2021). Source Imaging Constraints on Deep Earthquake Mechanisms. Poster presentation at the *American Geophysical Union Fall Meeting*, New Orleans, LA.
15. **Kehoe, H. L.**, E. D. Kiser (2021). Source Imaging Constraints on Deep-Focus Earthquake Mechanisms. Oral presentation at the *University of Arizona Geosciences Symposium*, Tucson, AZ.
14. Chen, M., Z. Xi, E. D. Kiser, **H. L. Kehoe** (2021). Slab Morphology at the Source Region of the 2015 Mw 7.9 Bonin Earthquake Imaged by Full Waveform Inversion. Oral presentation at the *Seismological Society of America Annual Meeting*, Virtual.
13. Kiser, E. D., **H. L. Kehoe**, M. Chen, A. N. Hughes (2020). Conjugate Faulting, Lower Mantle Seismicity, and Slab Settling Associated with the 2015 Bonin Islands Deep-Focus Earthquake. Poster presentation at the *American Geophysical Union Fall Meeting*, Virtual.
12. **Kehoe, H. L.**, E. D. Kiser, M. Chen (2020). Four-Dimensional Rupture Processes of Deep-Focus Earthquakes Near Japan. Poster presentation at the *American Geophysical Union Fall Meeting*, Virtual.
11. Chen, M., Z. Xi, E. D. Kiser, **H. L. Kehoe** (2020). Slab morphology at the source region of the 2015 Mw 7.9 Bonin earthquake imaged by full waveform inversion. Poster presentation at the *American Geophysical Union Fall Meeting*, Virtual.
10. Kiser, E. D., **H. L. Kehoe**, M. Chen (2020). A High-Resolution 4D Source Image of the 2015 M7.9 Bonin Deep-Focus Earthquake. Oral presentation at the *Seismological Society of America Annual Meeting*, Cancelled.
9. **Kehoe, H. L.** & E. D. Kiser (2020). Supershear Transition Across a Fault Stepover Observed During the 2017 Magnitude 7.7 Komandorsky Islands Earthquake. Oral presentation at the *University of Arizona Geosciences Symposium*, Tucson, AZ.
8. **Kehoe, H. L.** & E. D. Kiser (2019). A Genetic Algorithm-Based Back-Projection Method Reveals the Bilateral and Supershear Rupture of the 2017 Mw 7.8 Komandorsky Islands Earthquake. Poster presentation at the *American Geophysical Union Fall Meeting*, San Francisco, CA.
7. **Kehoe, H. L.**, E. D. Kiser, & P. G. Okubo (2019). Complex Rupture Properties of the 2018 Mw 6.9 Hawai'i Earthquake as Imaged by a Genetic Algorithm-Based Back-Projection Technique. Oral presentation at the *University of Arizona Geosciences Symposium*, Tucson, AZ.
6. **Kehoe, H. L.**, E. D. Kiser, & P. G. Okubo (2018). The Rupture Process of the 2018 Mw 6.9 Hawai'i Earthquake as Revealed by a Genetic Algorithm-Based Source Imaging Technique. Oral presentation at the *American Geophysical Union Fall Meeting*, Washington, DC.
5. **Kehoe, H. L.** & E. D. Kiser (2018). Back-Projection Results of the 4 May 2018 Hawai'i Earthquake using a Genetically Optimized Sub-Array Selection Scheme. Poster presentation at the *IRIS Workshop*, Albuquerque, NM.
4. **Kehoe, H. L.** & E. D. Kiser (2018). Genetic Algorithm Optimization Applied to Back-Projection Sub-Array Selection. Poster presentation at the *University of Arizona Geosciences Symposium*, Tucson, AZ.
3. **Kehoe, H. L.**, S. Chakraborty, T. L. C. Pham, E. Alvarado, & M. H. Thiemens (2016). $\Delta^{17}\text{O}$ Trends of Collected Atmospheric CO_2 Resulting from Seasonal Changes in the Biosphere. Poster presentation at the *American Geophysical Union Fall Meeting*, San Francisco, CA.
2. **Kehoe, H. L.** & S. Chakraborty (2016). Synthesis of Oxides over a Dust Surface Analog. Oral presentation at the *29th UC San Diego Undergraduate Research Conference*, La Jolla, CA.
1. Chakraborty S., **H. L. Kehoe**, & M. H. Thiemens (2016). New Experimental Evidence of Silicate Formation with Meteorite Like Oxygen Isotopes on a Dust Surface Analog. Oral Presentation at the *Lunar Planetary Science Conference XXXXVII*, Houston, TX.

White Papers	2. Stamps, D. S., Z. Eilon, W. Fan, C. Lynner, H. Kehoe , H. A. Ford, S. Wei, C. Rollins, C. G. Barcheck, N. J. Lindsey, M. R. Siegfried, S. Naif (2020). An Early Career Investigator Community Vision for the Future NSF Geophysical Facility: Instrumentation Services Needs. White Paper. https://doi.org/10.6084/m9.figshare.12398288.v1	
	1. Ford, H. A., M. Floyd, D. S. Stamps, M. Mendoza, E. Bozdog, D. Bowden, J. Byrnes, W. Fan, H. Kehoe , E. Chaussard, N. J. Lindsey, S. Wei, G. Barcheck, T. S. de Smet, H. Janiszewski, E. Lindsey, J. K. MacCarthy, K. Materna, S. Naif, D. Portner, D. Trugman, I. Wang (2020). An Early Career Investigator Community Vision for the Future NSF Geophysical Facility: Data Services Needs. White Paper. https://doi.org/10.6084/m9.figshare.12398321.v1	
Teaching Experience	Graduate Teaching Assistant (UA):	
	GEOS 322: Introduction to Geophysics	Spring 2018
	GEOS 212: Introduction to Oceanography	Fall 2018
Field Experience	IRIS PASSCAL Training	2020
	Lassen Volcanic National Park Nodal Experiment	2019
	White Wolf Fault Active Source Nodal Experiment	2019
	Grand Teton National Park Nodal Experiment	2018
	Raton, New Mexico Nodal Experiment	2018
	Joshua Tree National Monument Nodal Experiment	2017
Service	Journal Reviewer: <i>Science Advances</i> , <i>Geophysical Research Letters</i> , <i>Geophysical Journal International</i> , <i>Seismological Research Letters</i>	
	Session Convener: <i>AGU Fall Meeting</i> (2020)	

(Current as of 20 March 2024)