Haiyang Liam Kehoe

Contact

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Research Appointments

U.S. Geological Survey — Golden, CO
Mendenhall Postdoctoral Fellow — 2023–Present

U.S. Geological Survey — Golden, CO
Student Trainee (Physical Science) — 2021–2023
Supervisors: Sean Ahdi and Morgan Moschetti

Education

University of Arizona — Tucson, AZ
Ph.D. Geosciences — 2023
Advisor: Eric Kiser

University of California, San Diego — La Jolla, CA
B.S. Physics — 2017
Advisors: Subrata Chakraborty and Mark Thiemens

Publications

4. Kiser, E. D. & **H. L. Kehoe** (2021). The hazard of coseismic gaps: the 2021 Fukushima earthquake. *Geophysical Journal International*, 227 (1), 54-57. https://doi.org/10.1093/gji/ggab208
3. 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. *Geophysical Research Letters*, 48 (13), e2021GL093111. https://doi.org/10.1029/2021GL093111
2. **Kehoe, H. L.** & E. D. Kiser (2020). Evidence of a Supershear Transition Across a Fault Stepover. *Geophysical Research Letters*, 47 (10), e2020GL087400. https://doi.org/10.1029/2020GL087400
1. **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. *Geophysical Research Letters*, 46 (5), 2467–2474. https://doi.org/10.1029/2018GL080397

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. Bozdag, 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

Invited Talks

2. **Kehoe, H. L.** (2022). Improved Constraints on Back-Projection Source Models Using Algorithmic Seismic Array Design. Invited oral presentation at the *University of Utah SeismoTea Seminar*, 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 *Lawrence Livermore National Laboratory*, Livermore, CA.

Conference Talks

7. 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 *Seismological Society of America Annual Meeting*, San Juan, PR.
6. **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.
5. **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.
4. **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.
3. **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.
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.

Conference Posters

8. **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.
7. 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.
6. **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.
5. 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.
4. **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.
3. **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.
2. **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.

1. **Kehoe, H. L.**, S. Chakraborty, T. L. C. Pham, E. Alvarado, & M. H. Thiemens (2016). $\Delta^{17}O$ 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.

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: *Geophysical Research Letters*, *Geophysical Journal International*
Session Convener: *AGU Fall Meeting* (2020)

(Current as of 3 May 2023)