

Alyssa N. Kamanu

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EDUCATION

2019 Ph.D., Earth and Planetary Sciences, University of Hawai'i at Mānoa (UHM)
2013 B.S. Geophysics, University of California Los Angeles

PROFESSIONAL EXPERIENCE

University of Hawai'i at Mānoa

2024- Assistant Specialist, Department of Earth Sciences
2021-2023 Junior Researcher, Hawai'i Sea Grant
2023 Extension Specialist, Pacific Drought Knowledge Exchange
2021-2023 Postdoctoral Fellowship, Pacific Islands Climate Adaptation Science Center
2020- Program Manager, Earth, Planets, 'Ike, Kuleana (EP'IK)
2020-2021 Postdoctoral Researcher, Curriculum Studies in College of Education
2020-2021 Assistant Researcher, Hawai'i Institute of Geophysics and Planetology
2013-2019 Graduate Research Assistant, Department of Earth Sciences

TEACHING

University of Hawai'i at Mānoa

Geologic Inquiry (ERTH 200), Instructor, Dept of Earth Sciences (Spring 2024)
Volcanoes in the Sea (ERTH 104), Instructor, Dept of Earth Sciences (Summer 2023)
Seminar in Place-Based Education (EDCS 640P), Co-Instructor, Curriculum Studies (Fall 2020)
Intermediate Hawaiian (HAW 201), Substitute Teacher, Hawaiian Language (Spring 2018)
School of Ocean and Earth Science and Technology Tutor (Fall 2018)
Dynamic Earth Lab (GG 101L), Teaching Assistant, Dept of Earth Sciences (Spring 2017)
Geologic Inquiry (GG 200), Teaching Assistant, Dept of Earth Sciences (Spring 2014)
Structural Geology (GG 303), Teaching Assistant, Dept of Earth Sciences (Fall 2013)

Windward Community College

Geology of the Hawaiian Islands (ERTH / GG 103, Hawaiian language immersion), Instructor,
(Summer 2020, Spring 2021, Spring 2022)

MENTORING

Earth Sciences and Hawaiian Language UHM Undergraduate Student (2023-2024)
Bureau of Indian Affairs Pathways Program and Pacific Islands Climate Adaptation Science
Center, UHM Undergraduate Student (2022)
SOEST Maile Mentoring Bridge (2017-2019)
UHM Earth Sciences REU Program (2018)

Pacific GPS Facility UHM Undergraduate Student (2014)

FUNDING

*Funding prior to 2024 was awarded to A. Anderson

Active

2022-2024 UH Mānoa Strategic Investment Award (\$69,596). Mo‘olelo Honua: A Hawaiian Language Immersion Earth Science Course for Kama‘āina Communities Across the Hawaiian Islands. A. Anderson, L. Koga, B. Smith-Konter, S. Rowland, G. Ito, J. Komatsu, A. Eschenberg, H. Lorenzo-Elarco, P. Chinn, S. Businger. (07/28/2022 – 06/30/2024)

Completed

2021-2023 USGS Climate Adaptation Science Center (\$239,188). Future of fire in the Pacific Islands: Towards a national synthesis for wildland fire under a changing climate. C. Giardina, A. Anderson. (02/01/2021 – 01/31/2023)

2022 National Marine Sanctuary Foundation Ocean Exploration Education Grant (\$25,000). ‘Ike Moana: Ocean Literacy Through ‘Ōlelo Hawai‘i (Hawaiian Language), Hoku Pihana, P. Andrade, A. Anderson, H. Lorenzo-Elacro, K. Takahashi, K. Steward. (01/01/2022 – 07/15/2022)

2020-2021 UH Mānoa Strategic Investment Award (\$69,498 = \$44,498 Provost Funds, \$25,000 SOEST Dean’s Office). Strategic investment in high-impact practices in UHM online undergraduate education: Immersive Virtual Huaka‘i (Field Trips), B. Smith-Konter, H. A. Janiszewski, B. Houghton, S. Martel, J. Sinton, T. Shea, J. Konter, A. Anderson, J. Hammer, S. Rowland, H. Cremer, S. White, L. Koga, A. Swift, D. Hirata. (07/28/2020 – 06/30/2021)

PUBLICATIONS

*Publications prior to 2024 were published under the name A. Anderson

Manuscripts in preparation

1. Russell, A., Fontana, N., Hoecker, T., Kamanu, A., Majumder, R., Stephens, J., Young, A., Cravens, A., Littell, J., Giardina, C., Hiers, K., Terando, A. A future of fire: Communication of decision spaces for improvement of intentional fire use, landscape management, and climate adaptation
2. Kamanu, A., Giardina, C., Litton, C., Trauernicht, C., Johnson, M., Frazier, A., Cordell, S. Informing contemporary wildfire science from historical Hawaiian language newspapers
3. Kamanu, A., Fagents, S. A., Baloga, S. M., The Effects of Variations in Lava Channel Geometry on Flow Dynamics, Evolution, and Lengths

Peer Reviewed Publications

4. Anderson, A., Foster, J., Frazer, N. (2020). Implications of deflation-inflation event models on Kīlauea Volcano, Hawai‘i. *Journal of Volcanology and Geothermal Research* 397. 106832. 10.1016/j.jvolgeores.2020.106832.
5. Boston, B., Howell, S., Sleeper, J., Anderson, A., Cameron, M., Sigurdardottir, T., Tree,

- J., Togia, H., Smith-Konter, B., Moore, G. F. (2018). Seafloor Mapping at Your Fingertips: Setting Sail on Sonar Education with an Interactive Exhibit. *The Earth Scientist*, 34, 1, 11-15.
6. Mitchell, S.J., Biass, S., Houghton, B.F., Anderson, A., Bonny, E., Walker, B.H., Mintz, B.G., Turner, N.R., Frank, D., Carey, R.J., and Rosenberg, M.D. (2018). The interplay among clast size, vesicularity, postfragmentation expansion, and clast breakage: An example from the 1.8 ka Taupo eruption, in Poland, M.P., Garcia, M.O., Camp, V.E., and Grunder, A., eds., *Field Volcanology: A Tribute to the Distinguished Career of Don Swanson: Geological Society of America Special Paper 538*, p. 375–383, [https://doi.org/10.1130/2018.2538\(17\)](https://doi.org/10.1130/2018.2538(17)).

Other Publications

7. Quiocho, K., Fundis, A., Morishige, K., Lorenzo-Elarco, J. H., Pihana, H., Anderson, A., Cook, M. (2022). *Re-envisioning the Collective Voyage for Ocean Exploration* [White Paper]. Prepared for the 2022 National Ocean Exploration Forum. https://oceanleadership.org/wp-content/uploads/2022/01/Quiocho-Fundis_2022NOEF_Whitepaper_2-1-22.pdf

SERVICE AND OUTREACH

‘Ōlelo Hawai‘i reviewer for Hawai‘i Conservation Alliance / Hale Kuamo‘o Curriculum Units (September-December 2023)

Meet the Experts in Climate Science, Management, and Policy, UHM (July 2023)

Hawai‘i Ecosystems Meeting speaker, University of Hawai‘i at Hilo (July 2023)

Earth Workshop for educators hosted by PICASC and MBARI, speaker (July 2023)

Pacific Drought Knowledge Exchange presenter, Celebrate Micronesia Festival (May 2023)

Pacific Fire Exchange Talk Story Tuesday, speaker (March 2023)

Papahānaumokuākea Marine National Monument and Ocean Exploration Trust Expedition Outreach cultural working group (July 2021-present)

11th Annual Rising Voices Workshop: Understanding the Relationships: People, Place, Technology, the Environment, and Climate Change (May-June, 2023)

Hawai‘i Climate Adaptation Science Summit co-organizer (January 2023)

US Geological Survey Fire Science Community of Practice, speaker (March, 2022)

10th Annual Rising Voices Workshop: Emergent Knowledge through Indigenous and Earth Science Collaborations (September, 2022)

NOAA Ocean Exploration Education Mini Grant Hawaiian language science curriculum developer (January-July 2022)

Windward District Science and Engineering Fair judge for English and Hawaiian language entries, Junior Division (February 2019, 2020, 2022)

UHM Earth Sciences REU Program, speaker (2018, 2021)

Biannual UHM SOEST Open House, exhibitor/ instructor (2013-2019)

Pearl City Highlands Elementary School guest community expert (2019)

Ke Kula Kaiapuni ‘o Ānuenue high school (2017-2019)

Hawai‘i State Science and Engineering Fair judge (2018-2019)

CONFERENCE ACTIVITY

*Contributions prior to 2024 were published under the name A. Anderson

1. Kamanu, A., Giardina, C., Frazier, A., Longman, R., Insights from historical Hawaiian language newspapers on climate, drought, and wildfires, 2024 AGU January Sessions.
2. Anderson, A., Cordell, S., Frazier, A., Giardina, C., Johnson, M., Litton, C., Trauernicht, C., The Future of Fire: Sociocultural and biophysical contexts for fire stewardship under climate change: Wildfire in the Hawaiian Islands: Insights from historical Hawaiian language newspapers, 2023 ESA.
3. Anderson, A., Giardina, C., Frazier, A., Longman, R., New Tools, Data Sources, and Approaches for managing climate impacts in Hawai‘i: Insights from Hawaiian Language Newspapers on Drought and Fire, 2023 Hawai‘i Conservation Conference.
4. Anderson, A., Cordell, S., Frazier, A., Giardina, C., Johnson, M., Litton, C., Trauernicht, C., Informing contemporary wildfire science from historical Hawaiian language newspapers, 2023 Hawai‘i Climate Adaptation Science Summit. (Invited)
5. Chinn, P., Kanahale-Mossman, H., Anderson, A., Akioka, W. K., Rogers, B. L., Learning in Place in Hawaii: How Ancestral Stories, Hawaiian Language, and Current Issues Inform Earth Science Education Oriented to Sustainability, 2022 GSA.
6. Anderson, A., Cordell, S., Frazier, A., Giardina, C., Johnson, M., Litton, C., Trauernicht, C., Wildfire under a changing climate in the Hawaiian Islands, 2022 Goldschmidt Geochemistry Conference. (Invited)
7. Anderson, A., Smith-Konter, B. R., Anderson, T. R., Burkhard L., Dulai, H., Engels, J., Ishii, H., Ito, G., Kane, H., Konter, J., McDonald, K., Okuhata, B., Rowland, S., Rubin, K., Tachera, D., Tavares., K., Connecting indigenous stories, geoscience knowledge, and the traditional practice of observation (kilo) to stimulate a more diversified geoscience community, 2022 Goldschmidt Geochemistry Conference. (Invited)
8. Anderson, A., Chinn, P. W. U., Akioka, W. K., Ka Hulihonua Hawai‘i: Student experiences in a Hawaiian language Earth science class, 2022 Mini Symposium on Indigeneity, Sustainability, and Resilience Research: Interdisciplinary Cross-Cultural Perspectives: Curriculum Studies Department at the College of Education, University of Hawai‘i at Mānoa and the Center for Ainu and Indigenous Studies and the Global Station for Indigenous Studies and Cultural Diversity, Hokkaido University.
9. Anderson, A., Chinn, P. W. U., Akioka, W. K., Teaching a place- and culture- based geoscience class in the Hawaiian language, 2022 International Conference on School’s Disaster Risk Reduction and Resilience Education in Practice, Taiwan. (Invited)
10. Anderson, A., Chinn, P. W. U., Akioka, W. K., Teaching a place- and culture- based geoscience class in the Hawaiian language, 2021 AGU Fall Meeting.
11. Anderson, A., Smith-Konter, B. R., Anderson, T. R., Burkhard L., Dulai, H., Engels, J., Ishii, H., Ito, G., Kane, H., Konter, J., McDonald, K., Okuhata, B., Rowland, S., Rubin, K., Tachera, D., Tavares., K., Connecting indigenous stories, geoscience knowledge, and the traditional practice of observation (kilo) to stimulate a more diversified geoscience community, 2021 AGU Fall Meeting.
12. Tamer, J., Bruce, G., Narish, M., Smith-Konter, B., Anderson, A., Rowland, S., Gomes, N., Anbar, A., Indigenous Voices Provide Context in Kīlauea Virtual Tours, 2021 AGU Fall Meeting.

13. Tamer, J., Bruce, G., Narish, M., Smith-Konter, B., Patao, L., Anderson, A., Pilimai Traub, P., Kaupiko, K., Gomes, N., Anbar, A., Giving Local Experts the Tools to Create Their Own Place-based, Digital Learning Experiences: A Case Study, 2021 AGU Fall Meeting.
14. Anderson, A., Cordell, S., Frazier, A., Giardina, C., Johnson, M., Litton, C., Trauernicht, C., Wildfire and grass invasion under a changing climate in the Hawaiian Islands, 2021 9th International Fire Ecology and Management Congress.
15. Anderson, A., Chinn, P. W. U., Akioka, W. K., Koga, R., Utilizing Hawaiian Language Newspapers for Place- and Culture-based Geoscience Education, 2021 International Conference on Language Documentation & Conservation.
16. Anderson, A., Chinn, P. W. U., Akioka, W. K., Teaching a Hawaiian Language Immersion Geoscience Course Online: Utilizing Hawaiian Language Newspapers for Place- and Culture-based Geoscience Education, 2021 Waasamoogikinwaa'amaading: Post-Pandemic Online and Distance Learning at Tribal Colleges.
17. Anderson, A., Chinn, P. W. U., Businger, S., Koga, R. L., Kahua A'o (A Learning Foundation): Utilizing Hawaiian Language Newspapers for Place and Culture-based Geoscience Education, 2020 AGU Fall Meeting.
18. Anderson, A., Fagents, S. A., Baloga, S. M., The Influence of Lava Channel Width Variations and Channel Bends on the Lengths, Dimensions, and Morphologies of Lava Flows, 2019 SACNAS.
19. Anderson, A., Fagents, S. A., Baloga, S. M., The Influence of Lava Channel Width Variations and Channel Bends on the Lengths, Dimensions, and Morphologies of Lava Flows, 2019 GSA.
20. Anderson, A., Rowland, S. K., Koga, R., Hawaiian Language Newspaper Insights to the 1859 Eruption of Maunaloa Volcano, Hawai'i: Applications to Geoscience Research and Education, 2019 GSA.
21. Mitchell, S. J., Biass, S., Houghton, B. F., Walker, B. H., Anderson, A., Bonny, E., Mintz, B. G., Turner, N. and Frank, D., 2017, The Interplay of Clast Size, Vesicularity and Secondary Fragmentation: An Example from the 1.8KA Taupo Eruption, 2017 GSA.