

Aaron J. Pietruszka | Curriculum Vitae

EDUCATION

Ph.D. Geology and Geophysics (1999)
University of Hawai'i at Mānoa, Honolulu, HI

B.A. Geophysical Sciences (1992), Departmental and General Honors
University of Chicago, Chicago, IL

PROFESSIONAL APPOINTMENTS

Associate Professor (*tenure-track*)
Department of Earth Sciences (2023 to present)
University of Hawai'i at Mānoa, Honolulu, HI

Associate Specialist (*non-tenurable faculty position, equivalent to Associate Professor*)
Department of Earth Sciences (2019 to 2023)
University of Hawai'i at Mānoa, Honolulu, HI

Research Geologist, U.S. Geological Survey (2012-2019), GS-1350-13
Southwest Isotope Research Laboratories, Denver, CO

Associate Professor (*with tenure*), Department of Geological Sciences (2009-2012)
San Diego State University, San Diego, CA

Assistant Professor, Department of Geological Sciences (2003-2009)
San Diego State University, San Diego, CA

Postdoctoral Research Associate, Department of Geology (2002)
University of Maryland, College Park, MD

Postdoctoral Research Fellow, Department of Terrestrial Magnetism (1999-2001)
Carnegie Institution of Washington, Washington, DC

HONORS AND AWARDS

Dr. Amefil "Amy" Agbayani Faculty/Staff Diversity Enhancement Award, University of Hawai'i at Mānoa (2024)

American Geophysical Union, 2017 Editor's Citation for Excellence in Refereeing, G-cubed (2018)

Geological Society of America, Fellow (2017)

STAR Award, U.S. Geological Survey (2016)

Outstanding Faculty Award, Most Influential Professor, Department of Geological Sciences, San Diego State University (2008, 2011)

Outstanding Faculty Member, Mortar Board Award, San Diego State University (2004)

J. Watumull Merit Scholarship, University of Hawai'i at Mānoa (1998)

Phi Beta Kappa (1992)

National Merit Scholar (1988-1992)

INSTRUCTIONAL PORTFOLIO

ERTH 325: Geochemistry (undergraduate, 3 semester-hours)

ERTH 608: Isotopes and Trace Elements (graduate, 3 semester-hours)

MANUSCRIPTS IN PROCESS (* = Pietruszka student, 1st author)

4. *Mershon, R.B., **A.J. Pietruszka**, M.O. Garcia, B.R. Jicha, A.R. Steiner, P. Jiang, J.M. Rhodes, M.J. Vollinger (in preparation). The Detroit Volcanic Province and the early evolution of the Hawaiian mantle plume. To be submitted to *Earth and Planetary Science Letters*.
3. *Pasqualon, N.G., **A.J. Pietruszka**, V. A. Finlayson, V.D. Wanless, A. Balbas, M. J. Cunningham, J. G. Konter (in review). Ambient compositional heterogeneity of the Pacific upper mantle revealed by the Cretaceous Naifeh-Plumeria Seamounts. *Earth and Planetary Science Letters*.
2. **Pietruszka, A.J.**, D.E. Heaton, J.P. Marske, M.D. Norman, M.G. Robbins, R.B. Mershon, K.J. Lynn, D.T. Downs, A.R. Steiner, J.M. Rhodes, M.O. Garcia (in review). Awakening of Maunaloa linked to melt shared from Kīlauea’s mantle source. *Journal of Petrology*.
1. **Pietruszka A.J.**, M.J. Cunningham, I.N. Bindeman, M.O. Garcia, J.R. Boro, D.H. Burns, P. Jiang (in review). Melt flux from the mantle regulates the crustal processing and $\delta^{18}\text{O}$ variations of Kama’ehuakanaloa magmas. *Journal of Petrology*.

PEER-REVIEWED PUBLICATIONS (* = Pietruszka student, 1st author)

36. **Pietruszka A.J.**, M.O. Garcia, R.W. Carlson, E.H. Hauri (2023). Slow changes in lava chemistry at Kama’ehuakanaloa linked to sluggish mantle upwelling on the margin of the Hawaiian plume. *Geology* 51, 713-717, <https://doi.org/10.1130/G51350.1>.
35. **Pietruszka A.J.**, M.O. Garcia, J.M. Rhodes (2021). Accumulated Pu’u ‘Ō’ō magma fed the voluminous 2018 rift eruption of Kīlauea Volcano: evidence from lava chemistry. *Bulletin of Volcanology* 83:59, <https://doi.org/10.1007/s00445-021-01470-3>.
34. Garcia, M.O., **A.J. Pietruszka**, M.D. Norman, J.M. Rhodes (2021). Kīlauea's Pu’u ‘Ō’ō eruption (1983-2018): a synthesis of magmatic processes during a prolonged basaltic event. *Chemical Geology*, 581:120391, <https://doi.org/10.1016/j.chemgeo.2021.120391>.
33. **Pietruszka A.J.**, D.E. Heaton, M.O. Garcia, J.P. Marske (2019). Explosive summit collapse of Kīlauea Volcano in 1924 preceded by a decade of crustal contamination and anomalous Pb isotope ratios. *Geochimica et Cosmochimica Acta* 258:120-137, <https://doi.org/10.1016/j.gca.2019.05.029>.
32. Tucker, J.M., E.H. Hauri, **A.J. Pietruszka**, M.O. Garcia, J.P. Marske, F.A. Trusdell (2019). A high carbon content of the Hawaiian mantle from olivine-hosted melt inclusions. *Geochimica et Cosmochimica Acta* 254:156-172, <https://doi.org/10.1016/j.gca.2019.04.001>.
31. **Pietruszka A.J.**, J.P. Marske, D.E. Heaton, M.O. Garcia, J.M. Rhodes (2018). An isotopic perspective into the magmatic evolution and architecture of the rift zones of Kīlauea Volcano. *Journal of Petrology* 59:2311-2352, <https://doi.org/10.1093/petrology/egy098>.
30. **Pietruszka A.J.**, L.A. Neymark (2017). Evaluation of laser ablation double-focusing SC-ICPMS for “common” Pb isotopic measurements in silicate glasses and minerals. *Journal of Analytical Atomic Spectrometry*, 32:1135-1154, <https://doi.org/10.1039/c7ja00005g>.
29. Garcia M.O., B.R. Jicha, J.P. Marske, **A.J. Pietruszka** (2017). How old is Kīlauea Volcano (Hawai’i)? Insights from $^{40}\text{Ar}/^{39}\text{Ar}$ dating of the 1.7-km-deep SOH-1 core. *Geology* 45:79-82, <https://doi.org/10.1130/G38419.1>.
28. Neymark L.A., C.S. Holm-Denoma, **A.J. Pietruszka**, J.N. Aleinikoff, C.M. Fanning, R.M. Pillers, R.J. Moscati (2016). High spatial resolution U-Pb geochronology and Pb isotope geochemistry of magnetite-apatite ore from the Pea Ridge iron oxide-apatite deposit, St. Francois Mountains, southeast Missouri, USA. *Economic Geology* 111:1915-1933, <https://doi.org/10.2113/econgeo.111.8.1915>.

PEER-REVIEWED PUBLICATIONS (continued)

27. Konter J.G., **A.J. Pietruszka**, B.B. Hanan, V.A. Finlayson, P.R. Craddock, M.G. Jackson, N. Dauphas (2016). Unusual $\delta^{56}\text{Fe}$ values in Samoan rejuvenated lavas generated in the mantle. *Earth and Planetary Science Letters* 450:221-232, <https://doi.org/10.1016/j.epsl.2016.06.029>.
26. Vlastélic I., **A.J. Pietruszka** (2016). A review of the recent geochemical evolution of Piton de la Fournaise Volcano (1927-2010), in Bachèlery P., J.-F. Lenat, A. Di Muro, L. Michon (eds.), Active volcanoes of the southwest Indian Ocean: Piton de la Fournaise and Karthala: Active Volcanoes of the World, p. 185-201, https://doi.org/10.1007/978-3-642-31395-0_11.
25. **Pietruszka A.J.**, D.E. Heaton, J.P. Marske, M.O. Garcia (2015). Two magma bodies beneath the summit of Kīlauea Volcano unveiled by isotopically distinct melt deliveries from the mantle. *Earth and Planetary Science Letters* 413:90-100, <https://doi.org/10.1016/j.epsl.2014.12.040>.
24. Garcia M.O., D. Weis, L. Swinnard, G. Ito, **A.J. Pietruszka** (2015). Petrology and geochemistry of volcanic rocks from the South Kaua'i Swell Volcano, Hawai'i: Implications for the lithology and composition of the Hawaiian mantle plume. *Journal of Petrology* 56:1173-1197, <https://doi.org/10.1093/petrology/egv033>.
23. Greene A.R., M.O. Garcia, **A.J. Pietruszka**, D. Weis, J.P. Marske, M.J. Vollinger, J. Eiler (2013). Temporal geochemical variations in lavas from Kīlauea's Pu'u 'Ō'ō eruption (1983–2010): cyclic variations from melting of source heterogeneities. *Geochemistry, Geophysics, Geosystems*, 14:4849-4873, <https://doi.org/10.1002/ggge.20285>.
22. **Pietruszka A.J.**, M.D. Norman, M.O. Garcia, J.P. Marske, D.H. Burns (2013). Chemical heterogeneity in the Hawaiian mantle plume from the alteration and dehydration of recycled oceanic crust. *Earth and Planetary Science Letters* 361:298-309, <https://doi.org/10.1016/j.epsl.2012.10.030>.
21. *Marske J.P., **A.J. Pietruszka**, F.A. Trusdell, M.O. Garcia (2011). Geochemistry of southern Pagan Island lavas, Mariana arc: the role of subduction zone processes. *Contributions to Mineralogy and Petrology* 162:231-252, <https://doi.org/10.1007/s00410-010-0592-1>.
20. Tian L., P.R. Castillo, D.R. Hilton, J.W. Hawkins, B.B. Hanan, **A.J. Pietruszka** (2011). Major and trace element and Sr-Nd isotope signatures of the northern Lau Basin lavas: implications for the composition and dynamics of the back-arc basin mantle. *Journal of Geophysical Research* 116, B11201, <https://doi.org/10.1029/2011JB008791>.
19. **Pietruszka A.J.**, M.J. Keyes, J.A. Duncan, E.H. Hauri, R.W. Carlson, M.O. Garcia (2011). Excesses of seawater-derived ^{234}U in volcanic glasses from Lō'ihī Seamount due to crustal contamination. *Earth and Planetary Science Letters* 304:280-289, <https://doi.org/10.1016/j.epsl.2011.02.018>.
18. **Pietruszka A.J.**, E.H. Hauri, J. Blichert-Toft (2009). Crustal contamination of mantle-derived magmas within Piton de la Fournaise Volcano, Réunion Island. *Journal of Petrology* 50:661-684, <https://doi.org/doi:10.1093/petrology/egp016>.
17. Tian L., P.R. Castillo, J.W. Hawkins, D.R. Hilton, B.B. Hanan, **A.J. Pietruszka** (2008). Major and trace element and Sr-Nd isotope signatures of lavas from the Central Lau Basin: implications for the nature and influence of subduction components in the back-arc mantle. *Journal of Volcanology and Geothermal Research* 178:657-670, <https://doi.org/10.1016/j.jvolgeores.2008.06.039>.
16. *Marske J.P., M.O. Garcia, **A.J. Pietruszka**, J.M. Rhodes, M.D. Norman (2008). Geochemical variations during Kīlauea's Pu'u 'Ō'ō eruption reveal a fine-scale mixture of mantle heterogeneities within the Hawaiian plume. *Journal of Petrology* 49:1297-1318, <https://doi.org/10.1093/petrology/egn025>.
15. **Pietruszka A.J.**, A.D. Reznik (2008). Identification of a matrix effect in the MC-ICP-MS due to sample purification using ion exchange resin: an isotopic case study of molybdenum. *International Journal of Mass Spectrometry* 270:23-30, <https://doi.org/10.1016/j.ijms.2007.11.001>.

PEER-REVIEWED PUBLICATIONS (continued)

14. *Marske J.P., **A.J. Pietruszka**, D. Weis, M.O. Garcia, J.M. Rhodes (2007). Rapid passage of a small-scale mantle heterogeneity through the melting regions of Kīlauea and Mauna Loa Volcanoes. *Earth and Planetary Science Letters* 259:34-50, <https://doi.org/10.1016/j.epsl.2007.04.026>.
13. Snyder D.C., E. Widom, **A.J. Pietruszka**, R.W. Carlson, H.-U. Schmincke (2007). Time scales of formation of zoned magma chambers: U-series disequilibria in the Fogo A and 1563 A.D. trachyte deposits, São Miguel, Azores. *Chemical Geology* 239:138-155, <https://doi.org/10.1016/j.chemgeo.2007.01.002>.
12. **Pietruszka A.J.**, E.H. Hauri, R.W. Carlson, M.O. Garcia (2006). Remelting of recently depleted mantle within the Hawaiian plume inferred from the ^{226}Ra - ^{230}Th - ^{238}U disequilibria of Pu'u 'Ō'ō eruption lavas. *Earth and Planetary Science Letters* 244:155-169, <https://doi.org/10.1016/j.epsl.2006.01.039>.
11. **Pietruszka A.J.**, R.J. Walker, P.A. Candela (2006). Determination of mass-dependent molybdenum isotopic variations by MC-ICP-MS: an evaluation of matrix effects. *Chemical Geology* 225:121-136, <https://doi.org/10.1016/j.chemgeo.2005.09.002>.
10. Norman M., M.O. Garcia, **A.J. Pietruszka** (2005). Trace-element distribution coefficients for pyroxenes, plagioclase, and olivine in evolved tholeiites from the 1955 eruption of Kīlauea Volcano, Hawai'i, and the petrogenesis of differentiated rift-zone lavas. *American Mineralogist* 90:888-899, <https://doi.org/10.2138/am.2005.1780>.
9. Snyder D.C., E. Widom, **A.J. Pietruszka**, R.W. Carlson (2004). The role of open-system processes in the development of silicic magma chambers: a chemical and isotopic investigation of the Fogo A trachyte deposit, São Miguel, Azores. *Journal of Petrology* 45:723-738, <https://doi.org/10.1093/petrology/egg104>.
8. Garcia M.O., **A.J. Pietruszka**, J.M. Rhodes (2003). A petrologic perspective of Kīlauea Volcano's summit magma reservoir. *Journal of Petrology* 44:2313-2339, <https://doi.org/10.1093/petrology/egg079>.
7. **Pietruszka A.J.**, R.W. Carlson, E.H. Hauri (2002). Precise and accurate measurement of ^{226}Ra - ^{230}Th - ^{238}U disequilibria in volcanic rocks using plasma ionization multicollector mass spectrometry. *Chemical Geology* 188:171-191, [https://doi.org/10.1016/S0009-2541\(02\)00106-7](https://doi.org/10.1016/S0009-2541(02)00106-7).
6. **Pietruszka A.J.**, K.H. Rubin, M.O. Garcia (2001). ^{226}Ra - ^{230}Th - ^{238}U disequilibria of historical Kīlauea lavas (1790-1982) and the dynamics of mantle melting within the Hawaiian plume. *Earth and Planetary Science Letters* 186:15-31, [https://doi.org/10.1016/S0012-821X\(01\)00230-8](https://doi.org/10.1016/S0012-821X(01)00230-8).
5. Garcia M.O., **A.J. Pietruszka**, J.M. Rhodes, K. Swanson (2000). Magmatic processes during the prolonged Pu'u 'Ō'ō eruption of Kīlauea Volcano, Hawai'i. *Journal of Petrology* 41:967-990, <https://doi.org/10.1093/petrology/41.7.967>.
4. **Pietruszka A.J.**, M.O. Garcia (1999). The size and shape of Kīlauea Volcano's summit magma storage reservoir: a geochemical probe. *Earth and Planetary Science Letters* 167:311-320, [https://doi.org/10.1016/S0012-821X\(99\)00036-9](https://doi.org/10.1016/S0012-821X(99)00036-9).
3. **Pietruszka A.J.**, M.O. Garcia (1999). A rapid fluctuation in the mantle source and melting history of Kīlauea Volcano inferred from the geochemistry of its historical summit lavas (1790-1982). *Journal of Petrology* 40:1321-1342, <https://doi.org/10.1093/etroj/40.8.1321>.
2. Garcia M.O., E. Ito, J.M. Eiler, **A.J. Pietruszka** (1998). Crustal contamination of Kīlauea Volcano magmas revealed by oxygen isotope analyses of glass and olivine from Pu'u 'Ō'ō eruption lavas. *Journal of Petrology* 39:803-817, <https://doi.org/10.1093/etroj/39.5.803>.
1. Garcia M.O., J.M. Rhodes, F.A. Trusdell, **A.J. Pietruszka** (1996). Petrology of lavas from the Pu'u 'Ō'ō eruption of Kīlauea Volcano: III. The Kupaianaha episode (1986-1992). *Bulletin of Volcanology* 58:359-379, <https://doi.org/10.1007/s004450050145>.

RECENT AND NEAR-FUTURE CONFERENCE PRESENTATIONS (* = Pietruszka student, 1st author)

12. *Mershon, R.B., **A.J. Pietruszka**, M.O. Garcia, B.R. Jicha, A.R. Steiner, P. Jiang, M.J. Vollinger, J.M. Rhodes (2024). New Insights into the depleted component of the Hawaiian mantle plume from Detroit Seamount lavas. To be presented at the Fall 2024 Meeting of the American Geophysical Union.
11. *Robbins, M.G., **A.J. Pietruszka**, K.J. Lynn, D.T. Downs, A.R. Steiner, J. M. Rhodes (2024). Kīlauea's summit reservoir before and after the 2018 caldera collapse: mixing timescales and volume estimates from 2020–2023 lava chemistry. To be presented at the Fall 2024 Meeting of the American Geophysical Union.
10. **Pietruszka A.J.**, Cunningham, M.J., I.N. Bindeman, M.O. Garcia, J.R. Boro, D.H. Burns, P. Jiang (2024). Melt flux from the mantle regulates the crustal processing and $\delta^{18}\text{O}$ variations of Kama'ehuakanaloa magmas. 2024 Goldschmidt Conference (oral).
9. *Mershon R.B., **A.J. Pietruszka**, M.O. Garcia, A.R. Steiner, M.J. Vollinger, J.M. Rhodes, B.R. Jicha (2023). Widespread alkalic volcanism suggests a Hawaiian plume-only origin for the Emperor Seamounts. Fall 2023 Meeting of the American Geophysical Union, V31C-0111 (poster).
8. **Pietruszka A.J.**, Cunningham, M.J., I.N. Bindeman, M.O. Garcia, J.R. Boro, D.H. Burns (2023). Melt flux from the mantle regulates the crustal processing and $\delta^{18}\text{O}$ variations of Kama'ehuakanaloa magmas. Fall 2023 Meeting of the American Geophysical Union, V23C-0177 (poster).
7. *Cunningham M.J., **A.J. Pietruszka**, M.O. Garcia, I.N. Bindeman (2022). Mantle vs. crust: untangling influences on melt stable O isotopic composition via tandem olivine-glass $\delta^{18}\text{O}$ analyses at Kama'ehu volcano, Hawai'i. 2022 Goldschmidt Conference (oral and poster).
6. *Mershon R.B., **A.J. Pietruszka**, M.O. Garcia, J.M. Rhodes, M.J. Vollinger, B.R. Jicha (2022). Compositionally diverse alkalic volcanism along the Emperor Seamount Chain. Fall 2022 Meeting of the American Geophysical Union, V15B-0085 (poster).
5. **Pietruszka A.J.**, M.O. Garcia, J.M. Rhodes (2022). Accumulated Pu'u 'Ō'ō magma fed the voluminous 2018 rift eruption of Kīlauea Volcano: evidence from lava chemistry. 2022 Goldschmidt Conference (oral and poster).
4. **Pietruszka A.J.**, M.D. Norman, M.O. Garcia (2022). Does Kama'ehu volcano sample a "Kea" or "Loa" mantle source within the Hawaiian plume? Fall 2022 Meeting of the American Geophysical Union, V15B-0071 (poster).
3. *Cunningham M.J., **A.J. Pietruszka**, M.O. Garcia, D.W. Graham, I.N. Bindeman (2021) The first geochemical exploration of the mantle and crustal signatures of young lavas from the North Rift Zone of Lō'ihi volcano, Hawai'i. Fall 2021 Meeting of the American Geophysical Union, V35D-0161 (poster).
2. **Pietruszka A.J.**, J.M. Rhodes, M.O. Garcia (2021). Accumulated Pu'u 'Ō'ō magma fed the voluminous 2018 rift eruption of Kīlauea Volcano: evidence from lava chemistry. Fall 2021 Meeting of the American Geophysical Union, V41C-02 (oral).
1. **Pietruszka A.J.** (2020). Mantle controls on Kīlauea's magmatic and eruptive behavior. 2020 Goldschmidt (oral).

EXTRAMURAL RESEARCH GRANTS (* = active)

- *National Science Foundation, \$520,450, *Principal Investigator* (2022) OCE 21-35692. Collaborative Research: Early evolution of the Hawaiian plume from the geochemistry and geochronology of basalts spanning the entire Emperor Seamount Chain.
- *National Science Foundation, \$422,615 (\$399,977 plus supplement of \$22,638), *Principal Investigator* (2020) EAR 20-11366. Mantle controls on magmatic-volcanic cycles at basaltic volcanoes: an isotopic probe of the Pu'u 'Ō'ō, Halema'uma'u, and 2018 Leilani eruptions of Kīlauea Volcano.

EXTRAMURAL RESEARCH GRANTS (continued)

*National Science Foundation, \$624,649, *Co-principal Investigator* (2020) EAR 20-18807. MRI: Acquisition of a Thermal Ionization Mass Spectrometer (TIMS) for Multidisciplinary Research and Student Training at UH.

National Science Foundation, \$41,986, *Co-investigator* (2019) Supplement to OCE 17-37284 (M.O. Garcia, PI). Using Lō'ihī basaltic rocks to understand the Hawaiian plume.

National Science Foundation, \$169,771, *Principal Investigator* (2011) EAR 11-18738. Collaborative research: Magmatic evolution of Kīlauea Volcano, Hawai'i: Past, Present and Future.

National Science Foundation, \$164,883, *Principal Investigator* (2008) EAR 07-38671. Collaborative research: Hawaiian plume heterogeneity and melting dynamics revealed by Kīlauea's ongoing eruption, prehistoric lavas and olivine-hosted melt inclusions.

National Science Foundation, \$151,397, *Principal Investigator* (2008) EAR 07-38286. Using ^{226}Ra - ^{230}Th - ^{238}U disequilibria to test the hypothesis of peridotite-pyroxenite melt mixing at Hawaiian shield volcanoes.

National Science Foundation, \$262,777, *Co-principal Investigator* (2005) EAR 04-53138. Collaborative research: Chemical, isotopic, and volatile constraints on the evolution of the Lau Basin.

National Science Foundation, \$210,583, *Principal Investigator* (2004) EAR 03-46052. Production of high-purity ^{229}Th for analyses of U- and Th-series isotopes in geological materials.

National Science Foundation, \$30,000 (SDSU portion), *Co-principal Investigator* (2004) EAR 03-36874. What are the parental magma compositions for historical Kīlauea lavas?

National Science Foundation, \$51,830, *Principal Investigator* (2000) EAR 00-03359. A geochemical investigation of the dynamics of mantle melting within the Réunion plume using the ^{226}Ra - ^{230}Th - ^{238}U disequilibria of historical lavas from Piton de la Fournaise Volcano (1931-1998).

UH-MĀNOA PROJECT MANAGEMENT (NSF grants of Dr. Jasper Konter)

National Science Foundation, \$40,973, *Acting Principal Investigator* (2022) OCE 21-21846. Collaborative Research: Investigating mantle source reservoirs and Cretaceous plate motions recorded by ancient mid-Pacific oceanic rises and seamount tracks.

National Science Foundation, \$309,050, *Acting Principal Investigator* (2020) OCE 19-12934. Collaborative Research: Do improved absolute plate motion models based on Cretaceous Western Pacific seamounts relate Louisville to Ontong-Java?

National Science Foundation, \$37,996, *Acting Principal Investigator* (2020) OCE 19-36453. Collaborative Research: Testing for large scale Hawaiian arch volcanism and associated magma sources.

RECENT AND ONGOING PROFESSIONAL SERVICE

- Instructor, week-long summer outreach program on "Hawaiian Volcanoes and Hazards" for local Hawai'i high school and community college students (2023, 2024).
- Chair, Search Committee for Assistant/Associate Specialist in Isotope Geochemistry, Department of Earth Sciences, UH-Mānoa (2023).
- Faculty advisor, Out in STEM, LGBTQ+ discussion and support group in the Departments of Earth Sciences, Atmospheric Sciences, and Oceanography, and the Institute for Astronomy at UH-Mānoa (2022-present).
- Led a successful effort to re-envision the process of graduate admissions for the Department of Earth Sciences at UH-Mānoa (2022-2023).
- Chair, Search Committee for Assistant Specialist in Geoscience Education and Outreach (GEO), Department of Earth Sciences, UH-Mānoa (2022-2023).
- Co-convenor, session in memory of Dr. Jasper Konter for the 2022 Fall AGU Conference.

RECENT AND ONGOING PROFESSIONAL SERVICE (continued)

- Guest Associate Editor, *Frontiers in Earth Science* (Petrology) for research topic on *Basaltic Volcanism: From Magmatic Processes to Eruptive Styles* (2020-2021).
- Leader of the effort to create four all-gender restrooms in the POST building, and thereby enhance Diversity, Equity, and Inclusion (DEI) in SOEST (2021).
- Panelist, National Science Foundation, Petrology and Geochemistry Program, EAR (Nov. 16-19, 2020).
- Participant, Huliāmahi, a weekly student-faculty discussion and action group for Inclusion, Diversity, Equity, and Advocacy (IDEAs) in the Department of Earth Sciences, UH-Mānoa (2020-2022).
- Participant, Unlearning Racism in the Geosciences (URGE), Huliāmahi Pod, representing the Department of Earth Sciences, UH-Mānoa (2021).
- Member, SOEST Diversity, Equity, and Inclusion (DEI) Council, UH-Mānoa (2019-2021).
- Co-convenor, Hawai'i-themed session for the 2020 Goldschmidt Conference.
- Interviewer, graduate student annual check-ins, Department of Earth Sciences, UH-Mānoa (2020, 2022-2024).
- Demonstrator, SOEST Open House, UH-Mānoa (2019, 2023-2024).
- Director, high-purity Th-229 project for the U-series isotope scientific community, SDSU, USGS, and UH-Mānoa (2004-2024).

SUPERVISION AND MENTORING

Post-doctoral Research Scientists

Caroline Neh Ngwa (2023), **Kathleen Scheiderich** (2015), **Tyrone Rooney** (2007), **Jasper Konter** (2007)

Doctoral Students

Natália Gauer Pasqualon (2021 to present), Earth Sciences, UH-Mānoa
Physical volcanology and geochemistry of Pacific oceanic islands and seamounts Advisor/Supervisor

Reed Mershon (2022 to present), Earth Sciences, UH-Mānoa
Geochemistry of the Emperor Seamounts and the early evolution of the Hawaiian hotspot Advisor/Supervisor

Mahinaokalani Robbins (2023 to present), Earth Sciences, UH-Mānoa
Kīlauea's summit magma storage reservoir before and after the 2018 summit collapse Advisor/Supervisor

Masters Students

Molly Cunningham (M.S. 2022), Earth Sciences, UH-Mānoa
Oxygen and hydrogen isotopes of glass and olivine from Kama'ehuakanaloa Advisor/Supervisor

Daniel Heaton (M.S. 2011), Geological Sciences, SDSU
Isotope geochemistry of historical Kīlauea summit eruptions (~1820 to 1982) Advisor/Supervisor

Alena Buhler (M.S. 2011), Geological Sciences, SDSU
Petrology and geochemistry of young lavas from Upolu and Savai'i, Samoa Advisor/Supervisor

Dale Burns (M.S. 2009), Geological Sciences, SDSU
Petrology and geochemistry of the lower Uēkahuna Bluff, Kīlauea Advisor/Supervisor

Jennifer Duncan (M.S. 2008), Geological Sciences, SDSU
Isotope geochemistry of lavas from Kama'ehuakanaloa Advisor/Supervisor

Audrey Reznik (M.S. 2006), Geological Sciences, SDSU
Evaluation of matrix effects for molybdenum isotopic analyses by MC-ICPMS Advisor/Supervisor

Jared Marske (M.S. 2005), Geological Sciences, SDSU
Petrology and geochemistry of the upper Uēkahuna Bluff, Kīlauea Advisor/Supervisor

Rebekah McGirk (M.S. 2005), Geological Sciences, SDSU
Siderophore-mediate isotopic fractionation of iron Co-Advisor

Doctoral Dissertation Committees

(* = served on comprehensive exam committee)

*Rose Gallo (2022 to present), Earth Sciences, UH-Mānoa	Committee Member
Nabila Mohd Nizam (2021 to present), Earth Sciences, UH-Mānoa	Committee Member
Adrien Mourey (Ph.D. 2021), Earth Sciences, UH-Mānoa	Committee Member
Eleanor Bates (2023 to present), Oceanography, UH-Mānoa	University Representative
Siddhartha Bharadwaj (2024 to present), Earth Sciences, Dartmouth	External Committee Member
Evelyn Frères (2003), Earth, Ocean, and Atmospheric Sciences, UBC	External Committee Member

Masters Thesis Committees

Annie Chien (2023 to present), Earth Sciences, UH-Mānoa	Committee Member
Jade Wight (M.S. 2023), Earth Sciences, UH-Mānoa	Committee Member

Bachelors Students

Marlon Velasco (B.S. 2024), Earth Sciences, UH-Mānoa, Senior project	Advisor
Araela Richie (Summer 2021), Earth Science on Volcanic Islands REU program, UH- Mānoa	Advisor
Joanna Rose (B.S. 2013), Geological Sciences, SDSU, Senior Thesis	Advisor
Carrie Welker (B.S. 2011), Geological Sciences, SDSU, Senior Thesis	Advisor
Matthew Keyes (B.S. 2010), Geological Sciences, SDSU, Senior Thesis	Advisor
Jennifer Piper (B.S. 2008), Geological Sciences, SDSU, Senior Thesis	Advisor
Angela Cavallini (B.S. 2008), Geological Sciences, SDSU, Senior Thesis	Advisor
Kyle Welchans (B.S. 2007), Geological Sciences, SDSU, Senior Thesis	Advisor
Melissa Sabga (B.S. 2006), Geological Sciences, SDSU, Senior Thesis	Advisor
Michael Higgins (B.S. 2005), Geological Sciences, SDSU, Senior Thesis	Advisor
Jose Espino (B.S. 2003), Geological Sciences, SDSU, Senior Thesis	Advisor

TEACHING EXPERIENCE

University of Hawai'i at Mānoa

ERTH 325: Geochemistry (Fall semesters, 2023-2024)
 ERTH 608: Isotopes and Trace Elements (Spring semester, 2024)

San Diego State University

Geol 324: Petrology (Spring semesters, 2004-2012)
 Geol 530: Geochemistry (Fall semesters, 2003-2005, 2007-2011)
 Geol 660: Isotope Geology (Fall semesters, 2005, 2007, 2009)
 Geol 600: Graduate Seminar (Fall semesters, 2004, 2006, 2008)
 Geol 596: Undergraduate/Graduate Seminar (Spring semester, 2003)

FIELD INVESTIGATIONS

- USGS-HVO Eruption Response Team Participant, Kīlauea Volcano, Hawai'i (2018)
- Volcanological Field Work, Upolu and Savai'i, Samoa (2006)
- Oceanographic Cruise Scientific Crew Member, R/V Melville Magellan Leg 08 (2006)
- Volcanological Field Work, Kīlauea Volcano, Hawai'i (2010, 2007, 2006, 2003, 1992 to 1999)
- Volcanological Field Work, Diamond and Jordan Craters, Oregon (2005)
- Oceanographic Cruise Scientific Crew Member, R/V Yokosuka JAMSTEC YK99-7 (1999)
- Oceanographic Cruise Scientific Crew Member, R/V Melville GLORIA Leg 08 (1993)

INVITED TALKS AND SEMINARS

- Dept. of Earth and Environmental Geosciences, Colgate University—Hamilton, NY (2024)
- Dept. of Earth Sciences/G&G, Univ. of Hawai'i—Honolulu, HI (2001, 2019, 2023)
- Dept. of Earth and Planetary Sciences, Univ. of Tennessee—Knoxville, TN (2019)
- NordVulk Summer School on "Magmatic Processes", Reykjavik, Iceland (2017)
- Dept. of Geology and Geological Engineering, Colorado School of Mines—Golden, CO (2013)

INVITED TALKS AND SEMINARS (continued)

- Denver Federal Center, U.S. Geological Survey—Denver, CO (2012)
- Dept. of Geological Sciences, California State Univ.—Northridge, CA (2007)
- Dept. of Geological Sciences, Univ. of Colorado—Boulder, CO (2006)
- Dept. of Geological Sciences, California State Univ.—San Diego, CA (2002, 2005)
- Scripps Institution of Oceanography, Univ. of California—San Diego, CA (2003)
- Dept. of Earth, Environmental, and Planetary Sciences, Case Western Reserve Univ.—Cleveland, OH (2002)
- Dept. of Earth and Atmospheric Sciences, Univ. of Houston—Houston, TX (2002)
- Dept. of Geological Sciences, Univ. of North Carolina—Chapel Hill, NC (2001)
- Dept. of Earth, Planetary, and Space Sciences, Univ. of California—Los Angeles, CA (2001)
- Geological Society of Washington—Washington, DC (2000)
- Dept. of Geology, Univ. of Maryland—College Park, MD (2000)
- Dept. of Terrestrial Magnetism, Carnegie Institution of Washington—Washington, DC (1999)
- Hawaiian Volcano Observatory, U. S. Geological Survey, Volcano, Hawai'i (1999)

U.S. GEOLOGICAL SURVEY PROJECT MANAGEMENT

Mineral Resources Program, *Chief Scientist* (2017-2019)

Project: Application of plasma ionization isotope ratio mass spectrometry and U-Pb geochronology to collaborative studies of ore minerals and ore-forming processes.

Mineral Resources Program, *Chief Scientist* (2012-2016)

Project: Design and creation of a metal-free clean laboratory for isotope geochemistry, and acquisition of a Nu Plasma II MC-ICPMS.

PROFESSIONAL AFFILIATIONS

American Geophysical Union, The Geochemical Society, Geological Society of America

GRADUATE AND POSTDOCTORAL ADVISORS

Richard Carlson (Carnegie Inst. of Washington), Michael Garcia (Univ. of Hawai'i), Erik Hauri (Carnegie Inst. of Washington, deceased), Kenna Rubin (Univ. of Hawai'i), Richard Walker (Univ. of Maryland)