

Tristan McKenzie

Department of Marine Sciences
University of Gothenburg
Carl Skottbergsgata 22 B
413 19 Gothenburg, Sweden

+46 72-373 49 71
tristan.mckenzie@gu.se
www.drtristanmckenzie.com
**formerly known as Trista*

EDUCATION

Doctor of Philosophy (Ph.D.), Geology and Geophysics

University of Hawai'i at Mānoa

Dissertation: Multi-tracer Approaches for Groundwater Discharge and Anthropogenic Pollution in the Pacific

Aug. 2018 – Dec. 2020

Honolulu, Hawai'i

Master of Science (M.S.), Geology and Geophysics

University of Hawai'i at Mānoa

Report: Kāne'ōhe Bay and Watershed: A Review of its Hydrogeology, Historical and Current Sources of Pollution and Methods to Quantify Pollutant Fluxes and Sources

Aug. 2016 - July 2018

Honolulu, Hawai'i

Bachelor of Science (B.S.), Geology and Geophysics

University of Hawai'i at Mānoa

Thesis: Quantifying Atmospheric Fallout of Fukushima-derived Radionuclides in the Hawaiian Islands

May 2014 - May 2016

Honolulu, Hawai'i

RESEARCH EXPERIENCE

Postdoctoral Research Fellow (Supervisor: Isaac Santos)

University of Gothenburg

Marie Skłodowska-Curie Individual Fellowship

- *Planning and execution of field research aboard the R/V Alice aiming to understand benthic fluxes of pharmaceuticals and greenhouse gases in hypoxic and anoxic basins in Sweden*
- *Field-based research into relationships between coastal aquifer biogeochemistry and pharmaceutical attenuation in groundwater*

Sept. 2021 – present

Gothenburg, Sweden

Postdoctoral Research Fellow (Supervisor: Henrietta Dulai)

University of Hawai'i at Mānoa

Hawai'i EPSCoR 'Ike Wai Postdoctoral Research Fellow

- *Application of deep learning and time-series analysis to model global field data*
- *Supervision of streamflow deep learning undergraduate research project*

Jan. – May 2021

Honolulu, Hawai'i

Graduate Research Assistant (Supervisor: Henrietta Dulai)

University of Hawai'i at Mānoa

Hawai'i EPSCoR 'Ike Wai Graduate Fellow

- *Sensor development and deployment*
- *Application of machine learning to long-term time-series from Hawai'i*

Aug. 2019 – Dec. 2020

Honolulu, Hawai'i

Visiting Ph.D. Student (Supervisor: Isaac Santos)

National Marine Science Centre (Southern Cross University)

Limnology and Oceanographic Exchange Research (LOREX) Fellowship

- *Field and lab analyses of radium, nutrients, and pharmaceuticals in Sydney Harbour*

June – July 2019

Coffs Harbour, Australia

Graduate Research Assistant (Supervisor: Mahdi Belcaid)

University of Hawai'i at Mānoa

Hawai'i Data Science Institute Graduate Fellow

- *Development of courses on probabilistic programming and time series analysis*
- *Data analysis and management for the Hawai'i EPSCoR 'Ike Wai project*

June 2018 – May 2019

Honolulu, Hawai'i

Graduate Research Assistant (Supervisor: Henrietta Dulai)

University of Hawai'i at Mānoa

Sea Grant Graduate Trainee

- *Collection and analysis of contaminants of emerging concern (CECs), radon, nutrients, and trace metals to study groundwater contamination*
- *Analysis of $\delta^{15}\text{N}-\text{NO}_3^-$ and $\delta^{18}\text{O}-\text{NO}_3^-$ in water*

Aug. 2016 – May 2018

Honolulu, Hawai'i

Laboratory Assistant

University of Hawai'i at Mānoa

- *Radiochemical preparation and analysis of soils, mushrooms, and seawater.*
- *Submarine groundwater discharge field and lab methods including radon and radium techniques, nutrient sampling, and carbon chemistry analysis, analytical chemistry laboratory techniques.*

Jan. 2015 – May 2016

Honolulu, Hawai'i

PUBLICATIONS (PEER-REVIEWED)

1. Mora C., **McKenzie, T.**, Gaw, I., Dean, J., von Hammerstein, H., Knudson, T., Setter, R., Smith, C., Webster, K., Patz, J., Franklin, E. (2022). Over half of known human pathogenic diseases can be aggravated by climate change. *Nature Climate Change*. doi: 10.1038/s41558-022-01426-1. [Altmetric Score: 5902, ranked #3 of 3,782 publications in Nature Climate Change for media attention \(as of September 8, 2022\); covered by 748 news stories](#)
2. **McKenzie, T.**, Dulai, H., Fuleky, P., (2021). Traditional and Novel Time-Series Approaches Reveal Submarine Groundwater Discharge Dynamics Under Baseline and Extreme Event Conditions. *Scientific Reports*, 11, 22570. doi: 10.1038/s41598-021-01920-0.
3. **McKenzie, T.**, Habel, S., Dulai, H., (2021). Sea-level rise drives wastewater leakage to coastal waters and storm drains. *Limnology and Oceanography Letters*. doi: 10.1002/lol2.10186.
4. **McKenzie, T.**, Holloway, C., Dulai, H., Tucker, J., Sugimoto, R., Nakajima, T., Harada, K., Santos, I.R. (2020). Submarine groundwater discharge and flushing times drive contaminants of emerging concern in the coastal ocean (Sydney, Australia). *Marine Pollution Bulletin*, 160: 111519. doi: 10.1016/j.marpolbul.2020.111519.
5. **McKenzie, T.**, Dulai, H., Chang, J. (2019). Parallels between stream and coastal water quality associated with groundwater discharge. *PLoS ONE*, 14(10): e0224513. doi: 10.1371/journal.pone.0224513.
6. **McKenzie, T.** & Dulai, H. (2017). Fukushima-derived radiocesium in the Hawaiian Islands. *Journal of Environmental Radioactivity*, 180, 106-113. doi: 10.1016/j.jenvrad.2017.10.003.
7. **McKenzie, T.** (2016). Quantifying Atmospheric Fallout of Fukushima-Derived Radioactive Isotopes in Mushrooms in the Hawaiian Islands. *Mānoa Horizons*, 1, 28-33.

PUBLICATIONS (NOT PEER-REVIEWED)

8. **McKenzie, T.** & Gaw, I. (2022). Research Briefing: Climate change exacerbates almost two-thirds of pathogenic diseases affecting humans. *Nature Climate Change*. doi: 10.1038/s41558-022-01435-0.
9. Chua, E.J., Beck, H.N., Cohen, A.B., Hintz, C.L., Knotts, E.R., Lauck, M., **McKenzie, T.**, Marín, A.R., Wilkins, K.W., Woodstock, M.S. (2020). *Handbook for International Research Collaborations*. Association for the Sciences of Limnology and Oceanography. [Online] Available: www.aslo.org/wp-content/uploads/Living-Handbook-International-Collaborations.pdf
10. Beck, H.N., Cohen, A., **McKenzie, T.**, Weisend, R., Wilkins K.W., Woodstock, M.S. (2019). Broadening Horizons: Graduate Students Participating in International Collaborations Through the Limnology and Oceanography Research Exchange (LOREX) Program. *Limnology and Oceanography Bulletin*, 28(3) 85-89. doi: 10.1002/lob.10339.

FUNDING

- 2021** **Marie Skłodowska-Curie Individual Fellowship (€203,852)**
European Commission, European Union Horizon 2020
Horizon 2020 Project “STE CECS”
- 2019** **Fred M. Bullard Fellowship (\$3,000)**
Earth Sciences Department, University of Hawai‘i at Mānoa
- 2019** **GSA On to the Future (OTF) Grant**
Geological Society of America (GSA)
- 2019** **Graduate Student Research Grant with Outstanding Mention (\$2,500)**
Geological Society of America (GSA)
One of the top 10 proposals submitted out of 748 in 2019
- 2018** **ASLO Limnology and Oceanography Research Exchange (LOREX) Fellowship**
Association for the Sciences of Limnology and Oceanography (ASLO)
- 2018** **William T. Coulbourn Fellowship (\$2,500)**
Dept. Geology & Geophysics, University of Hawai‘i at Mānoa
- 2018** **Hawai‘i Data Science Institute Fellowship (\$30,000)**
Hawai‘i Data Science Institute, University of Hawai‘i at Mānoa
- 2018** **GSO Travel Grant**
Graduate Student Organization (GSO), University of Hawai‘i at Mānoa
- 2017** **Fred M. Bullard Fellowship (\$3,000)**
Dept. Geology & Geophysics, University of Hawai‘i at Mānoa

HONORS AND AWARDS

- 2022** **UHM Nomination for ProQuest/CGS Distinguished Dissertation Award in STEM**
UHM’s nominee (2020-2022) in STEM to go on to national competition
- 2020** **L&O Letters Early Career Publication Award**
ASLO Limnology & Oceanography (L&O) Letters
- 2020** **Toby Lee ARCS Award in Earth Sciences (\$5,000)**
ARCS Foundation Honolulu Chapter
- 2019** **GSO Merit Award for PhD Research (\$5,000)**
Graduate Student Organization (GSO), University of Hawai‘i at Mānoa
- 2018** **GG-OGE Achievement Scholarship (\$1,500)**
Office of Graduate Education, University of Hawai‘i at Mānoa
- 2018** **Tester Symposium: Best Rapid-Fire Presentation**
43rd Annual Albert L. Tester Symposium, University of Hawai‘i at Mānoa
- 2016** **AGU Virtual Poster Showcase Spring 2016 Winner**
American Geophysical Union (AGU) Multi-Society Showcase

CONFERENCE PRESENTATIONS

(* invited, § oral presentation, ° poster, % student advisee, # presented by co-author)

- 2022** § **McKenzie, T.**, Majtenyi Hill, C., Tomer, A.S., Santos, I.R. Emerging contaminants to the coastal ocean via submarine groundwater discharge and the role of the coastal aquifer. *American Geophysical Union Fall Meeting*. Chicago, Illinois. 11-16 December 2022.

- 2022** *§ **McKenzie, T.** Impact of climate change on human pathogenic disease. *International Society for Neglected Tropical Diseases: Climate & Health Conference*. Virtual. 26-27 October 2022.
- 2022** # Falinski, K., **McKenzie, T.**, Dulai, H., Franklin, K., Wegmann, A. Can restoring seabird habitat on remote coralline atolls also improve groundwater resources? *Association for the Sciences of Limnology and Oceanography Ocean Sciences Meeting*. Virtual. 28 February– 4 March 2022.
- 2021** # Janiszewski, H.A., Caplan, C., Chertok, M., Coats, S., **McKenzie, T.**, Okuhata, B.K., Pietruszka, A.J., Ravanis, E., Shea, T., Tachera, D., Zhu, F. Huliāmahi: Overflowing of JEDI Efforts in the Earth Sciences at University of Hawai‘i at Mānoa. *American Geophysical Union Fall Meeting*. New Orleans, Louisiana. 13 -17 December 2021.
- 2021** *§ **McKenzie, T.**, The importance of coastal groundwater discharge. *Swedish Society for Marine Sciences Marine Research Days Conference*. Gothenburg, Sweden. 23-24 November 2021
- 2021** § **McKenzie, T.**, Smith, T.P., Tachera, D., Okuhata, B., Barde-Cabusson, S., Gibson, V., Eason, D. Utilizing Hawaiian language newspapers to identify key water resources in Hawai‘i. *Geological Society of America Cordilleran Section Meeting*. Virtual. 12-14 May 2021.
- 2021** § **McKenzie, T.**, Habel, S., Dulai, H. Sea-Level Rise and Groundwater Inundation Drive Wastewater Pollution to Coastal Waters and Storm Drains. *International Tropical Islands Water Conference*. Virtual. 12-15 April 2021.
- 2021** § **McKenzie, T.**, Dulai, H., Lee, J., Fuleky, P. Assessing the Drivers, Dynamics, and Temporal Variability of Submarine Groundwater Discharge using Traditional and Novel Time-Series Approaches. *International Tropical Islands Water Conference*. Virtual. 12-15 April 2021.
- 2021** % Uehara, B., **McKenzie, T.**, Dulai, H. Streamflow Forecasting Using Recurrent Neural Networks and Transfer Learning. *International Tropical Islands Water Conference*. Virtual. 12-15 April 2021.
- 2021** # Dulai, H., Hudson, C., **McKenzie, T.**, Okuhata, B., Tachera, D., El-Kadi, E. Geochemical signatures of coastal groundwater reflect groundwater flow lines and land-uses in West Hawaii. *International Tropical Islands Water Conference*. Virtual. 12-15 April 2021.
- 2020** **McKenzie, T.**, Dulai, H., Lee, J., Fuleky, P. Upscaling submarine groundwater discharge using local long-term high-resolution radon measurements and deep learning. *American Geophysical Union Fall Meeting*. Virtual. 1-17 December 2020.
- 2020** § **McKenzie, T.**, Dulai, H., Fuleky, P., Lee, J. Assessing submarine groundwater discharge dynamics using long-term high-resolution radon measurements and machine learning. *Goldschmidt Conference*. Virtual. 21-27 June 2020.
- 2020** § **McKenzie, T.**, Holloway, C., Tucker, J., Sugimoto, R., Nakajima, T., Harada, K., Dulai, H., Santos, I.R. Submarine Groundwater Discharge is a Source of Contaminants of Emerging Concern to the Coastal Ocean (Sydney, Australia). *Association for the Sciences of Limnology and Oceanography Ocean Sciences Meeting*. San Diego, California. 16-21 February 2020.
- 2020** § **McKenzie, T.** Adventures in International Collaboration in Australia Through the LOREX Program. *Association for the Sciences of Limnology and Oceanography Ocean Sciences Meeting*. San Diego, California. 16-21 February 2020.

- 2019** *§ **McKenzie, T.**, Habel, S., Dulai, H. Increased coastal pollution expected under future sea level stands: chemical evidence for tidal groundwater inundation of coastal wastewater infrastructure. *Geological Society of America Annual Meeting*. Phoenix, Arizona. 22-25 September 2019.
- 2019** § **McKenzie, T.**, Dulai, H., Chang, J. Linking baseflow and submarine groundwater discharge: impacts on water quality along the stream-coastal continuum in Kāneʻohe Bay and Watershed, Hawaiʻi. *Association of Limnology and Oceanography Aquatic Sciences Meeting*. San Juan, Puerto Rico. 24 February – 1 March 2019.
- 2018** § **McKenzie, T.**, Dulai, H., Popp, B., Whittier, R. Tracing surface-groundwater pathways of anthropogenic contaminants in Kāneʻohe Bay Watershed, Oʻahu, Hawaiʻi. 7th *International Conference on Environmental Future*. Honolulu, Hawaiʻi. 16-20 April 2018.
- 2018** § **McKenzie, T.** & Dulai, H. Fukushima-derived radiocesium fallout map of Hawaiʻi. *Methods and Applications of Radioanalytical Chemistry Conference*. Kona, Hawaiʻi. 8-13 April 2018.
- 2017** ° **McKenzie, T.**, Dulai, H., Popp, B., Whittier, R. Locating Groundwater Pathways of Anthropogenic Contaminants Using a Novel Approach in Kāneʻohe Watershed, Oʻahu, Hawaiʻi. *American Geophysical Union Fall Meeting*. New Orleans, Louisiana. 11-15 December 2017.
- 2017** ° **McKenzie, T.** & Dulai, H. Seasonality of groundwater inputs and associated anthropogenic fluxes in the Kahaluʻu Stream Complex, Oʻahu. *Geological Society of America Cordilleran Section Meeting*. Honolulu, Hawaiʻi. 23-25 May 2017.
- 2017** ° **McKenzie, T.** & Dulai, H. Groundwater inputs and their effect on water quality in the Kahaluʻu Stream. *Association of Limnology and Oceanography Aquatic Sciences Meeting*. Honolulu, Hawaiʻi. 26 February – 3 March 2017.
- 2017** § **McKenzie, T.** & Dulai, H. Quantifying Atmospheric Fallout of Fukushima-derived Radiocesium in the Hawaiian Islands. *Radiobioassay and Radiochemical Measurements Conference*. Honolulu, Hawaiʻi. 6-10 February 2017.
- 2016** ° **McKenzie, T.** & Dulai, H. Quantifying Atmospheric Fallout of Radioactive Isotopes in the Hawaiian Islands (EGU2016-10453). *European Geosciences Union: General Assembly*. Vienna, Austria. 18-22 April 2016.
- 2016** ° **McKenzie, T.** & Dulai, H. Quantifying Atmospheric Fallout of Radioactive Isotopes in the Hawaiian Islands. *AGU Virtual Poster Showcase, Multi-Society Showcase*, Washington DC. Poster. May 2016.

INVITED TALKS

- 2022** European Youth Parliament Czech Republic
Invited expert talk for panel on global warming
- 2022** University of São Paulo Medical School Seminar
Invited (virtual) talk on climate change aggravation of pathogenic disease
- 2021** Submarine Groundwater Discharge Virtual Seminar
Invited seminar speaker to over 40 attendees
- 2021** Hawaiʻi Water Resources Research Center (WRRC) and ʻIke Wai Seminar
Invited seminar speaker with over 100 attendees
- 2020** Cesspool Researchers, Advisors, and Planners (CRAP) Pau Hana Talk
Invited to give a scientific research presentation to members of the CRAP group

- 2019** Hawai'i Department of Transportation Harbor Tenant training talks
Invited to give a scientific talk to 40-50 (per session) harbor's tenants taking storm water awareness training (two sessions)
- 2019** Invited talk at Southern Cross University, Coffs Harbour, Australia
Invited to give scientific talk to about 20 staff and students at the National Marine Science Centre
- 2017** AGU Bright Stars Luncheon Invited Speaker
Invited speaker for AGU Bright Stars program (K-12) during the AGU Fall Meeting in New Orleans, Louisiana

OTHER TALKS

- 2022** Sea and Society Seminar Talk (University of Kiel, University of Gothenburg)
Scientific talk at joint seminar on Ocean Health
- 2022** Marine Science Department Seminar Talk (University of Gothenburg)
Scientific talk at departmental seminar entitled "Climate change aggravates over half of pathogenic diseases"
- 2021** Marine Science Department Seminar Talk (University of Gothenburg)
Scientific talk at departmental seminar entitled "Sea-Level Rise Negatively Impacts Coastal Water Quality: A Field-Based Geochemical Study"
- 2021** Earth Sci Departmental Lightning Talk (University of Hawai'i)
Scientific lightning talk at departmental seminar entitled "Submarine groundwater discharge in Kona"
- 2020** Earth Sci Departmental Lightning Talk (University of Hawai'i)
Scientific lightning talk at departmental seminar entitled "Upscaling submarine groundwater discharge using radon data and machine learning"
- 2018** Earth Sci. Departmental Colloquium Talk (University of Hawai'i)
Scientific talk at departmental seminar entitled "Mauka to Makai: Ground and surface water contamination to Kāne'ohē Bay"
- 2018** Tester Symposium: 5-minute rapid fire talk (University of Hawai'i)
Scientific talk at Tester Symposium entitled "Tracing groundwater pathways of wastewater using a novel approach in Kāne'ohē, O'ahu" to about 200 attendees
- 2018** Geology & Geophysics Departmental Colloquium Talk (Bullard)
Scientific talk at departmental seminar entitled "A novel approach for tracing diffuse pollution pathways"
- 2017** UH Sea Grant Hanauma Bay Education Program outreach talk
Outreach talk entitled "Identifying pollutant pathways: tracing pharmaceuticals into Kāne'ohē Bay" for about 30 attendees
- 2017** Interagency Workshop on Ecological Risk Research talk
Scientific talk for workshop influencing policy for Ecological Research Assessment in Hawai'i
- 2017** Sea Grant Research Symposium
Gave scientific talk to Sea Grant researchers
- 2017** Honolulu Nerd Nite Honolulu Outreach Talk
Outreach talk entitled "Urban streams on tropical islands – not the paradise you expect" for about 40 attendees

2016 UH Sea Grant Hanauma Bay Education Program outreach talk
Outreach talk entitled “The influence of surface and groundwater inputs on water quality in Kāne‘ohe Bay” for about 30 attendees

MENTORING & TEACHING EXPERIENCE

2021 Instructor
Instructor for marine chemistry portion of lower division undergraduate course entitled “Ocean models and databases” at the University of Gothenburg.

2020 Guest lecturer
Coastal Geochemistry graduate course, (nitrogen stable isotopes and water quality research in Hawai‘i, 2 lectures)

2019 Python workshop for Earth Scientists
Designed and taught a one-hour workshop on introductory Python programming with a focus on Pandas at the University of Hawai‘i.

2019 Guest lecturer
Geological Inquiry (geological cross-sections, 2 lectures)

2018 Guest lecturer
Humans and the Environment (water quality, 2 lectures)

2018- 2019 Course development
Development of two online 1-credit modules to be offered at the University of Hawai‘i:
- *Probabilistic programming with PyMC3*
- *Time-series analysis in Python*

2018 Graduate REU Assistant
Assisted with the NSF Research Experiences for Undergraduates (REU) program by facilitating twice a week meetings and workshops with the REU students.

2017-present Student research supervision:
Aprajita Tomer (MS Marine Science, Gothenburg University): 2022 - present
Brody Uehara (BS Computer Science, UHM): 2020-2021
Jennet Chang (NSF REU Student, UHM): 2017

WORKSHOPS

2018 Intelligent Systems for Geosciences (IS-GEO) Workshop - Hilo, Hawai‘i
Hackathon sensor development and deployment capturing the outskirts of Hurricane Hector

LEADERSHIP & SERVICE

Review Editor for *Frontiers in Water and Wastewater Management* (**2021 – present**)
Earth Sciences Dept. Diversity, Equity, and Inclusion (DEI) Group (**2020-2021**)
Earth Sciences Dept. Graduate Student Representative to the Graduate Studies Committee (**2019-2020**)
Society of Exploration Geophysicists UH Student Chapter (**2016-2020**)
Officer: Vice President (2019-2020), Secretary (2016-2018)

Manuscript reviewer for:

Journal of Radioanalytical and Nuclear Chemistry
Journal of Hydrology
Hydrogeology Journal
Limnology & Oceanography
Limnology & Oceanography Methods
Applied Radiation and Isotopes
Journal of Geophysical Research – Oceans
Frontiers in Water and Wastewater Management
Frontiers in Environmental Science
Environmental Health Insights
IEEE Intelligent Systems

SELECT MEDIA APPEARANCES AND INTERVIEWS

- 2022** **McKenzie, T.**, Mora, C., & von Hammerstein, H. 58% of human infectious diseases can be worsened by climate change – we scoured 77,000 studies to map the pathways. [The Conversation](#) (Aug. 2022). Article featured on numerous media outlets, including *Popular Science*.
Additional interviews provided for numerous print and live media sources, including [Eos](#), [World Economic Forum](#), & [Medical News Today](#)
- 2021** Interview with Hawai‘i News Now: This is Now
Sea-level rise driven groundwater inundation of wastewater infrastructure (Mar. 2021)
- 2020** ARCS Meet the Scholar Interview
[Interview](#) with ARCS Honolulu Chapter (Sep. 2020)
- 2020** GSA My OTF Experience Interview
[Interview](#) with GSA (Jan. 2020)
- 2019** AGU Paths through Science Interview
[Interview](#) with AGU Narratives (Apr. 2019)
- 2017** Sea Grant Educational Podcast
Outreach [podcast](#) (May 2017)
- 2017** Voice of the Sea TV Program
Episodes [4-1](#) and [4-2](#) (Feb. 2017)

OUTREACH ACTIVITIES

- 2022** Trans* Name Change Guide
[Guide](#) on maintaining professional identity for transgender researchers and academics
- 2022** Trans in STEM Blog
[Blog](#) documenting experiences as a transgender early career scientist
- 2021** Better Poster Workshop Coach
Coached students on how to create a better scientific poster (Feb. 2021)
- 2020** Radford High School Outreach (EP‘IK Program)
Taught hydrology and water quality to high schoolers (Oct. 2020)
- 2019** Kahala Elementary Science Showcase
Outreach activity for 75 4th graders (Dec. 2019)
- 2019** SOEST Semi-Annual Open House
Outreach event for over 6,000 K-12 attendees (Oct. 2019)

- 2019** ASLO Instagram Takeover
Posted content to ASLO's Instagram for 1 day (July 2019)
- 2019** AGU Instagram Takeover
Posted content to AGU's Instagram for 3 days (July 2019)
- 2019** ASLO LOREX Blog
Wrote 5 [blogs](#) about experiences with international collaboration (Summer 2019)
- 2018** Hawai'i Sea Grant Poster Symposium
Scientific poster presentation for Sea Grant representatives (Dec. 2018)
- 2018** Windward District Science Fair Judge
Judge of middle school science fair projects (Feb. 2018)
- 2017** AGU Near-Peer Undergraduate Mentoring Session
Participated as a mentor for undergraduate students during the AGU Fall Meeting in New Orleans, Louisiana (Dec. 2017)
- 2017** SOEST Semi-Annual Open House
Outreach event for over 6,000 K-12 attendees (Oct. 2017)
- 2017** Roosevelt High School Science Outreach
Outreach event for high school students (Apr. 2017)
- 2017** Bishop Museum Fall in Love with Science Outreach
Outreach event for children and their families (Feb. 2017)
- 2017** UH Sea Grant Hanauma Bay Volunteer Education Event
Outreach event for about 40 Hanauma Bay volunteers (Jan. 2017)

PROFESSIONAL MEMBERSHIPS

- 2017 – present** Association for the Sciences of Limnology and Oceanography
- 2016 – present** American Geophysical Union