

Joseph (Iosefa) Emile Honour Percival

CONTACT INFORMATION

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EDUCATION

Kyoto University Graduate School of Agriculture, Kyoto, Japan
Ph.D. in Agriculture, 2024
Dissertation: *Application of Satellite Remote Sensing Techniques to Detect Spatial and Temporal Patterns of Fire and Other Deforestation Drivers in Northwestern Madagascar*
Committee: Kaoru Kitajima (chair), Yusuke Onoda, and Daniel Epron

Kyoto University Graduate School of Global Environmental Studies, Kyoto, Japan
Master of Global Environmental Studies, 2018
Thesis: *The Importance of Seascape Structure on Fish Communities in the Mangroves of Samoa*

Brandeis University, Waltham, Massachusetts, USA
B.A. in Physics, Economics, and Environmental Studies, 2015
Highest Honors in Environmental Studies; Cum Laude
Thesis: *Ocean Acidification and Tuna Catch in the Western and Central Pacific Ocean*

ACADEMIC APPOINTMENTS

2026–Present **Lecturer**, University of Hawai‘i at Hilo
Instructor for Remote Sensing (GEOG 470 / CBES 640).

2024–Present **Postdoctoral Researcher**, Spatial Data Analytics and Visualization Lab, University of Hawai‘i at Hilo
Remote sensing, lidar, machine learning, and geospatial decision support for forest composition, invasive-species detection, biomass, and above-ground carbon mapping.

PUBLICATIONS

Peer-Reviewed Journal Articles

2026. **Percival, J.**, Lindiwe, K., Shiroma, K., Pascual, A., Guerra-Hernández, J., Ostertag, R., & Perroy, R. sam-stars: A multimodal, prompt-guided approach for individual tree crown delineation and species mapping. *Remote Sensing in Ecology and Conservation*. Accepted.

2026. Lindiwe, K., **Percival, J. H.**, & Perroy, R. L. Spectralmatch: Relative radiometric normalization toolkit for raster mosaics and time series. *Journal of Open Source Software*, 11(117), 8974. DOI: <https://doi.org/10.21105/joss.08974>

2025. Ye Myin, Y., **Percival, J.**, & Kitajima, K. Detecting oil palm plantations and mangroves overlooked by IGBP land-cover products with “ground-truthing from the sky” across Southeast Asia. *Trees, Forests and People*, 21, 100950. DOI: <https://doi.org/10.1016/j.tfp.2025.100950>

2025. **Percival, J.**, & Leamon, B. PyForestScan: A Python library for calculating forest structural metrics from lidar point cloud data. *Journal of Open Source Software*, 10(106), 7314. DOI: <https://doi.org/10.21105/joss.07314>

2024. **Percival, J.**, Sato, H., Razanaparany, T., Harilalao, A., Razafiarison, Z., & Kitajima, K. Non-fire-adapted dry forest of northwestern Madagascar: Escalating and devastating trends revealed by remote-sensing data. *PLOS ONE*, 19(2), e0290203. DOI: <https://doi.org/10.1371/journal.pone.0290203>

2022. **Percival, J.**, Tsutsumida, N., Murakami, D., Yoshida, T., & Nakaya, T. Exploratory spatial data analysis with gwpcorMapper: An interactive mapping tool for geographically weighted

correlation and partial correlation. *Journal of Geovisualization and Spatial Analysis*, 6, 17. DOI: <https://doi.org/10.1007/s41651-022-00111-3>

2017. **Percival, J.**, & Tsutsumida, N. Geographically weighted partial correlation for spatial analysis. *GI_Forum*, 1. DOI: https://doi.org/10.1553/giscience2017_01_s36

Peer-Reviewed Book Chapter

2024. Siisiialafia Mau, T. T., & **Percival, J.** Pacific Youth and Climate Activism: Safeguarding Our Fa‘asinomaga. In S. von Mering, T. E. Bell, W. Steele, A. da Silva Faustino, A. Ward, & M. Arjona Soberón (Eds.), *The Routledge Handbook of Grassroots Climate Activism*. Routledge. *Joint first author.*

SELECTED RESEARCH SOFTWARE

PyForestScan — Python tools for calculating and visualizing forest structural metrics from lidar point clouds. <https://pypi.org/project/pyforestscan/>

Spectralmatch — Relative radiometric normalization, large-scale mosaicking, and time-series generation for remote-sensing imagery. <https://pypi.org/project/spectralmatch/>

gedi-tools — Python tools for accessing, processing, and analyzing GEDI spaceborne lidar data. https://pypi.org/project/gedi_tools/

gwpcorMapper / GWpcor — R software for interactive geographically weighted correlation and partial-correlation analysis. <https://cran.r-project.org/package=gwpcorMapper>

vrpRouting — C++/PostgreSQL extension for solving vehicle-routing problems within PostGIS. <https://github.com/pgRouting/vrprouting>

SELECTED GRANTS AND AWARDS

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| 2026 | Tupaia Research Grant , Pacific Academy of Sciences — NZD 50,000
Principal Investigator. Remote-sensing detection and monitoring of the invasive vine <i>Merremia peltata</i> across Pacific islands. |
| 2021 | Copernicus Masters Japan Prize , European Space Agency |
| 2016 | CoHHO Fellow , Kyoto University |
| 2015 | Jacob B. Goldston Family Award for Environmental Excellence , Brandeis University |
| 2013 | Jerome A. Schiff Undergraduate Research Fellowship , Brandeis University |

LEADERSHIP AND SERVICE

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| 2026–Present | Vice President , Samoan Voyaging Society |
| 2025–Present | Charter Member , Open Source Geospatial Foundation (OSGeo) |
| 2024–Present | Project Steering Committee Member , pgRouting |
| 2024–Present | Peer Reviewer , scientific and open-source software journals |
| 2016–Present | Board Member and Trustee , Tiapapata Art Centre, Apia, Samoa |