

CONTACT INFORMATION	Dept. of Atmospheric Sciences, University of Hawaii 2525 Correa Road, HIG 350, Hololulu, HI 96822, USA <b>email:</b> ckaramp@hawaii.edu	<i>Tel:</i> (+1) 808 956 2565  christinakaramperidou.com
EMPLOYMENT	<b>University of Hawaii at Manoa, Department of Atmospheric Sciences:</b> Associate Professor 8/2020-date Assistant Professor 8/2016-7/2020 Assistant Researcher 12/2014-8/2016 Postdoctoral Researcher 09/2012-11/2014 <b>Columbia University, Department of Earth &amp; Environmental Engineering:</b> Adjunct Associate Research Scientist 09/2012-2016 Research & Teaching Assistant 2008-2012	
OTHER PROFESSIONAL POSITIONS	<b>University of Hawaii at Manoa, Department of Atmospheric Sciences:</b> Associate Department Chair 2/2022-date Director, Combined Pathway Program in Atmospheric Sciences 8/2020-date <b>Paleoceanography &amp; Paleoclimatology (AGU Journal):</b> Associate Editor 12/2020-date	
EDUCATIONAL BACKGROUND	<b>PhD</b> Columbia University Earth & Environmental Engineering 2012 <b>MPhil</b> Columbia University Earth & Environmental Engineering 2011 <b>MSc</b> A.U.Th. Environmental Protection & Sustainable Development 2007 <b>Diploma</b> Aristotle University of Thessaloniki Civil Engineering 2006	
HONORS & AWARDS	<ul style="list-style-type: none"> <li>• <b>Early Career Scientist Award</b> 2023 International Union of Geodesy Geophysics (IUGG); for significant contributions to understanding El Niño spatiotemporal diversity and associated impacts, from paleoclimate to modern times through multidisciplinary international collaborations</li> <li>• <b>Distinguished Young Scientist Award</b> 2023 Bodossaki Foundation; nominated in the field of Applied Science (decision pending)</li> <li>• <b>Public Service Commendation Medal</b>, Department of the Army 2020 4th highest distinction awarded to civilians for commendable public service</li> <li>• <b>Awarded early tenure and promotion</b>, University of Hawaii at Manoa 2019-2020 Endorsed to apply early by the Dean of SOEST and awarded TP after a total of 4 years in I3 position</li> <li>• <b>Regents Medal for Excellence in Teaching</b>, University of Hawaii at Manoa 2019-2020 Nominated by the SOEST Deans Office, but was ineligible because I had not yet accrued enough time teaching at UHM</li> <li>• <b>PhD title awarded with Distinction</b>, Columbia University 2012 for a dissertation ranking in quality in the top 10% defended by Columbia University students</li> <li>• <b>NASA Earth and Space Science Fellow (NESSF)</b> 2009-2012 for the study of Dynamics of the Hydrological Cycle in a Changing Climate</li> <li>• <b>Outstanding Student Paper Award</b>, AGU Atmospheric Sciences 2010 for the study of Northern Hemisphere Meridional and Zonal Temperature Gradients and their Relation to Hydrologic Extremes at Mid-latitudes</li> </ul>	

- **Fellow, Alexander S. Onassis Public Benefit Foundation** 2009-2012 for the study of nonlinear dynamics of hydrological systems using machine learning methods

FUNDED  
RESEARCH  
PROJECTS

**Principal Investigator in extramural awards totalling over \$4.3 million:**

- NSF AGS-2202663: Tropical Pacific Influences on Atmospheric Blocking across Climates. **Funding Agency:** National Science Foundation. **Performance Period:** 09/01/2022-08/31/2025. **Amount:** \$654,880. **PI:** C. Karamperidou
- NSF OCE-2219830: Response of the upper tropical Pacific Ocean to greenhouse gas forcing in observations and models. **Funding Agency:** National Science Foundation. **Performance Period:** 08/01/2022-07/31/2025. **Amount:** \$969,722. **Lead PI:** R. Seager; **PIs:** C. Karamperidou, M. Cane.
- NSF AGS-2043282: The relationship between ENSO diversity and Tropical Cyclones in a hierarchy of models. **Funding Agency:** National Science Foundation. **Performance Period:** 11/01/2020-10/31/2023. **Amount:** \$677,945. **Lead PI:** C. Karamperidou; **PIs:** S. Camargo, C. Patricola, C-Y Lee.
- NSF AGS-2202920: A paleowind synthesis of models and data to constrain the response of extratropical atmospheric circulation to external forcing. **Funding Agency:** National Science Foundation. **Performance Period:** 09/01/2022-08/31/2025. **Amount:** \$430,192. **Lead PI:** J. Conroy; **PI:** C. Karamperidou.
- NSF AGS-1902970: High-Resolution Dynamical and Statistical Downscaling of El Niño-Southern Oscillation (ENSO) Response in Proxy-Critical Locations across the Tropical Pacific. **Funding Agency:** National Science Foundation. **Performance Period:** 09/01/2019-08/31/2023. **Amount:** \$531,727. **PI:** C. Karamperidou
- NASA 19-EARTH19-0189: The Impact of ENSO Flavors on Atmospheric Blocking Occurrence and Interhemispheric Atmospheric Pathways. **Funding Agency:** National Aeronautics and Space Administration (NASA) Future Investigators in NASA Earth and Space Science and Technology. **Performance Period:** 09/01/2019-08/31/2023. **Amount:** \$132,543. **PI:** C. Karamperidou; **Future Investigator:** M. McKenna.
- NSF AGS-1602097: The Role of El Niño/Southern Oscillation (ENSO) Non-linearities and Asymmetries in Modulating Tropical Pacific Climate. **Funding Agency:** National Science Foundation. **Performance Period:** 05/15/2016-04/30/2019. **Amount:** \$430,283. **PI:** C. Karamperidou; **co-PIs:** J. Conroy, F.-F. Jin
- NSF AGS-1304910: Understanding changing ENSO flavors in the mid-Holocene laboratory. **Funding Agency:** National Science Foundation. **Performance Period:** 09/01/2013- 08/31/2017. **Amount:** \$439,605. **PI:** C. Karamperidou; **co-PIs:** P.N. DiNezio, F.-F. Jin
- **Open Education Research Grant:** Merging Mathematical and Conceptual Representations of Atmospheric Science - an OER text with Custom Ancillary and Supporting Materials. **Funding Agency:** Outreach College, University of Hawaii. **Performance Period:** 04/2017-04/2018. **Amount:** \$9,600. **co-PIs:** A.Nugent, C. Karamperidou, J. Griswold
- **Dynamics of the Hydrological Cycle in a Changing Climate: Interactions of Low Frequency Climate Mechanisms and Hydrologic Extremes.** **Funding Agency:** National Aeronautics and Space Administration (NASA). **Performance Period:** 09/01/2009-08/31/2012. **Amount:** \$90,000. **Earth & Space Science Fellow:** C. Karamperidou.
- **How can the contribution of climate variability, water release patterns, and hydrologic performance indices towards ecological restoration measures at the Everglades National Park be best quantified and predicted?** **Funding Agency:** National Park Service. **Amount:** \$151,721. **PI:** U. Lall. **Author of proposal & Graduate Research Assistant:** C. Karamperidou.

**Field experience:**

- Meteorological and hydrological data collection & lake coring, 2015, 2017

- Kiritimati, Republic of Kiribati
- Tree ring collection, Mauna Kea, Island of Hawaii, HI, USA 2015
- Groundwater data collection, Eleftherae, Greece 2003-2006

INVITED TALKS AT  
INTERNATIONAL  
CONFERENCES

- Fall Meeting 2019 Press Conference: Climate change & El Niño. *Presenters:* C. Karamperidou, M.A. Cane, J. Tierney, P.N. DiNezio.
- AGU Fall Meeting 2019, Dec 9-13, 2019, San Francisco, CA, USA, Session PP013: ENSO in the Pacific Basin: Insights from Proxy Records, Modelling Experiments, and Modern Climatology: *Reconciling eastern and central Pacific paleo-ENSO proxies: the role of coastal El Niño events. (Invited)*
- ENSO Science Symposium, Jan 29-Feb 2, 2019: Hobart, Australia: *Multi-resolution hierarchical modeling of ENSO flavors and their impacts. (Keynote)*
- AGU Fall Meeting 2018, Dec 10-14, 2018, Washington D.C., Session PP33B: Paleoclimatic History of El Niño-Southern Oscillation: *A multi-resolution approach to paleo-ENSO diversity in models and data. (Invited)*
- AGU Fall Meeting 2018, Dec 10-14, 2018, Washington D.C., GC42D: Untangling ENSO Complexity: From the Ancient Past to the Far Future I : *A hierarchy of models for ENSO diversity in past, present and future. (Invited)*
- IV International Conference on El Niño Southern Oscillation: ENSO in a warmer Climate, Oct 16-18, 2018, Guayaquil, Ecuador: *A hierarchy of models for ENSO diversity in past, present and future. (Invited)*

PUBLICATIONS

Christina Karamperidou is the author of 27 publications, including 25 articles and 2 book chapters, all in peer-reviewed scientific journals and books. The order of authors indicates contribution to the paper, with first author being the lead contributor. An asterisk (\*) indicates a student or postdoctoral advisee first author. This CV does not include the numerous contributed presentations in international conferences and workshops.

**Book Chapters (peer-reviewed):**

2. **Karamperidou, C.**, Stuecker M.F., Timmermann, A., Yun, K.-S., Lee, S.-S., Jin, F.-F., Santoso, A., McPhaden, M.J., and Cai, W., 2020: *ENSO in a changing climate: Challenges, Paleo-Perspectives, and Outlook*, In El Niño-Southern Oscillation in a Changing Climate, editors M. McPhaden, A. Santoso and W. Cai, Geophysical Monograph Series, American Geophysical Union, Wiley ISBN: 978-1-119-54812-6.

1. Jin, F.-F., Chen, H.-C., Zhao, S., Hayashi, M., **Karamperidou, C.**, M.F. Stuecker, and R.Xie, 2020: *Simple ENSO Models*, In El Niño-Southern Oscillation in a Changing Climate, editors M. McPhaden, A. Santoso and W. Cai, Geophysical Monograph Series, American Geophysical Union, Wiley ISBN: 978-1-119-54812-6.

**Journal Articles (peer-reviewed):**

25. **Karamperidou C.**, and P.N. DiNezio, 2022: *Holocene hydroclimatic variability in the tropical Pacific explained by changing ENSO diversity*. Nature Communications 13, 7244 (2022)

24. \*McKenna, M. and **C. Karamperidou**, 2022: *The Impacts of El Niño Diversity on Northern Hemisphere Atmospheric Blocking*, Geophysical Research Letters, under review.

23. \*Zhao, S. and **C. Karamperidou**, 2022: *Competing Effects of Eastern and Central-Western Pacific Winds Drive the Evolution of the 2017 Extreme Coastal El Niño.*, Geophysical Research Letters, Geophysical Research Letters, 49, e2022GL098859. <https://doi.org/10.1029/2022GL098859>

22. McPhaden M. and **C. Karamperidou**, 2022: *La Niña came to Eden*, Bulletin of the American Meteorological Society (BAMS), 103(12), E2862-E2877, DOI 10.1175/BAMS-D-21-0343.1.

21. Cai, W., A. Santoso, M. Collins, B. Dewitte, **C. Karamperidou**, J.-S.

- Kug, M. Lengaigne, M.J. McPhaden et al., 2021: *Changing ENSO in a warming climate*. Nature Reviews Earth Environment, 2, 628-644.
20. Stuecker, M. F., **Karamperidou, C.**, Nugent, A. D., Torri, G., Coats, S., Businger, S., 2021: *Comments on The Financial Dilemma of Students Pursuing an Atmospheric Science Graduate Degree in the United States*". Bulletin of the American Meteorological Society, 102(4), 323-324.
19. \*Lu, B., P. Chu, S. Kim, and **C. Karamperidou**, 2020: *Hawaiian Regional Climate Variability during Two Types of El Niño*. J. Climate, doi: <https://doi.org/10.1175/JCLI-D-19-0985.1>.
18. \*Wyman, D.A., J.L. Conroy, and **C. Karamperidou**, 2020: *The tropical Pacific ENSO-mean state relationship in climate models over the last millennium*, J. Climate, doi: <https://doi.org/10.1175/JCLI-D-19-0673.1>.
17. F.S.R. Pausata, D. Zanchettin, **C. Karamperidou**, R. Caballero, and D.S. Battisti, 2020: *ITCZ shift and extra-tropical teleconnections drive ENSO response to volcanic eruptions*, Science Advances, 6(23), doi:10.1126/sciadv.aaz5006
16. Cai, W., McPhaden, M.J., Grimm, A.M., Rodrigues R.R., Taschetto A.S., Garreaud R.D., Dewitte B., Poveda G., Ham, Y.-G., Santoso A., Ng B., Anderson W., Wang G., Geng T., Jo, H.-S., Marengo, J.A., Alves, L.M., Osman, M., Li, S., Wu, L., **Karamperidou, C.**, Takahashi, K., and Vera., C, 2020: *Climate impacts of the El Niño Southern Oscillation on South America*. Nature Reviews Earth Environment 1, 215231 (2020). <https://doi.org/10.1038/s43017-020-0040-3>
15. Conroy, J.L, **C. Karamperidou**, D.A. Grimley, and W.R. Guenther: *Westerly winds across eastern and mid-continental North America during the Last Glacial Maximum: A new data-model assessment*, Quaternary Science Reviews, 220, pp 14-29, doi: <https://doi.org/10.1016/j.quascirev.2019.07.003>
14. \*Kiefer, J. and **C. Karamperidou**, 2019: *High-resolution modeling of ENSO-induced precipitation in the tropical Andes: implications for proxy interpretation.*, Paleoceanography and Paleoclimatology, 34, pp 217-236.
13. \*Hou, Z., J. Li, R. Ding, **C. Karamperidou**, W. Duan, T. Liu, and J. Feng, 2018: *Asymmetry of the predictability limit of the warm ENSO phase*. Geophysical Research Letters, 45, pp 7646-7653. <https://doi.org/10.1029/2018GL077880>
12. Takahashi, K., **C. Karamperidou**, and B. Dewitte, 2018: *A theoretical model of strong and moderate El Niño regimes.*, Clim Dyn, 52 (12), pp 7477-7493, <https://doi.org/10.1007/s00382-018-4100-z>
11. **Karamperidou, C.**, F.F. Jin, and J.L. Conroy, 2017: *The Importance of ENSO Nonlinearities in Tropical Pacific Response to External Forcing.*, Clim Dyn, 49 (7-8), pp 2695-2704 —doi:10.1007/s00382-016-3475-y
10. F.S.R. Pausata, **C. Karamperidou**, R. Caballero and D.S. Battisti, 2016: *ENSO response to high-latitude volcanic eruptions: the role of the initial conditions*, Geophys. Res. Lett., 43 (16), pp 8694-8702.
9. **Karamperidou, C.**, P.N. Di Nezio, A. Timmermann, F.-F. Jin, and K.M. Cobb, 2015: *The response of ENSO flavors to mid-Holocene climate: Implications for proxy interpretation*, Paleoceanography 30(5), pp 527-547.
8. \*Schollaen, K., **C. Karamperidou**, P. Krusic, E.R. Cook, and G. Helle, 2015: *ENSO flavors in a tree-ring 18O record of Tectona grandis from Indonesia*. Climates of the Past, 11, pp 1325-1333, 2015cp-2014-118. <https://doi.org/10.5194/cp-11-1325-2015>
7. **C. Karamperidou**, M.A. Cane, U. Lall, A.T. Wittenberg, 2013b: *Intrinsic modulation of ENSO predictability viewed through a local Lyapunov lens.*, Climate Dynamics, 42:253, doi: 10.1007/s00382-013-1759-z
6. **C. Karamperidou**, V. Engel, E. Stabenau, U. Lall and T. Smith III, 2013a: *Implications of multi-scale sea level and climate variability for coastal resources: a case study for south Florida and Everglades National Park, USA.*, Regional Environmental Change, 13 (1), pp 91-100, doi: 10.1007/s10113-013-0408-8.
5. **C.Karamperidou**, F. Cioffi, and U. Lall, 2012: *Surface Temperature Gradients as Diagnostic Indicators of Midlatitude Circulation Dynamics*, J. Climate,

25, 4154-4171. <https://doi.org/10.1175/JCLI-D-11-00067.1>

4. D. Chavas, E. Yonekura, **C. Karamperidou**, N. Cavanaugh, K. Sherafin, 2012: *US Hurricanes and economic damage: an extreme value perspective.*, *Nat. Haz. Rev.*, doi: 10.1061/(ASCE)NH.1527-6996.0000102

3. **C.Karamperidou**, M.Vafeiadis, and K.L. Katsifarakis, 2010: *Groundwater Resources Management Optimization by means of Artificial Neural Networks.*, *Tech. Chron. Sci. J., Technical Chamber of Greece Editions, No 2, pp. 25-32, 2010.*

2. \*S.Arvanitidou, **C.Karamperidou**, and K.L. Katsifarakis, 2009: *Optimal Hydrodynamic Control of a Contaminant Plume. Proceedings of the Joint Conference of the Hellenic Hydraulic Union, and the Greek Committee for Water Resources Management, Volos, Greece, 27-30/05/2009*

1. **C.Karamperidou**, E.Karamperidou, and K.L. Katsifarakis, 2007: *Seawater intrusion into the aquifer of Eleftherae-N. Peramos, Kavala, Greece.* *WIT Transactions on Ecology and the Environment 104*, pp. 3-10, 2007.

MEMBERSHIP IN  
PROFESSIONAL  
SOCIETIES &  
ASSOCIATIONS

American Geophysical Union (AGU), American Meteorological Society (AMS), European Geoscience Union (EGU), International Society of Catastrophe Managers (ISCM), American Society of Civil Engineers (ASCE), International Association of Hydrogeologists, Technical Chamber of Greece (TEE-TCG)

SERVICE &  
SYNERGISTIC  
ACTIVITIES

**Associate Editor**, Paleoclimatology & Paleoclimatology, an AGU Journal.  
**Trained Search Advocate for Diversity, Equity and Inclusion**, Spring 2021, University of Hawaii at Manoa, Honolulu, HI

**Trained Expert Witness**, August 2016 & August 2018, Mitchell Hamline School of Law, St. Paul, MN

**Outreach:** Communicating current science and research news to raise public awareness about the importance of science, technology, climate and weather to the future of Hawaii and the Pacific (AGU Press Conference, Hawaii Public Radio, The Los Angeles Times, Pacific Hurricane Awareness Tour, Sky News Network, Olelo Public Access TV, ThinkTech Hawaii, Minnesota Public Radio)

**Volunteer Mentor and Judge**, Hawaii Association of Independent Schools, and Hawaii State Science and Engineering Fair (Hawaii Academy of Sciences)

**Convener and Chair:** AGU Fall Meetings, AGU Ocean Science Meetings

**Reviewer:** NSF, Nature, Nature Geoscience, Science Advances, Journal of Climate, Climate Dynamics, J. of Applied Meteorology & Climatology, Regional Environmental Change, Advances in Water Resources, Weather and Forecasting, Graduate Women in Science

**NSF Committee of Visitors**, AGS 2021.