Claire Zarakas

czarakas@uw.edu

EXPERIENCE

University of Washington | Seattle, WA
Graduate Student Research Assistant (9/2018 – Present)

- Analyzed model output from the Coupled Model Intercomparison Project (CMIP5/CMIP6) to quantify how plants' responses to increasing CO_2 concentrations influence global temperatures. Published findings in peer-reviewed publication in the Journal of Climate.
- Ran model experiments in the Community Earth System Model 2 (CESM2) to quantify how plants influence uncertainty in hydrologic cycling, including hydrologic extremes (e.g. flooding, drought).
- Gave over 10 scientific presentations at national conferences, workshops, and external seminars.

Abt Associates | Cambridge, MA
Associate Analyst (12/2017 – 7/2018)
Climate Change Research Assistant (8/2016 – 12/2017)

- Analyzed biofuel and land use strategies to reduce net greenhouse gas emissions in Rhode Island, which were used in the Rhode Island Greenhouse Gas Emissions Reduction Plan.
- Modeled air quality and public health co-benefits of the Regional Greenhouse Gas Initiative (RGGI) with multi-disciplinary team and wrote report which garnered attention in multiple outlets (e.g. New York Times and Natural Resources Defense Council). Earned Abt Spot Recognition Award for contributions.
- In collaboration with the U.S. Environmental Protection Agency, analyzed output from CMIP5 models to inform future risks of extreme heat and record-level rainfall in the United States, which contributed to two peer-reviewed publications.
- Developed tool to quantify the climate benefits of a proposed anaerobic digester in Naucalpan, Mexico and translated documentation from English to Spanish.

Undergraduate Research and Internship Experience

- Researched constraints on tropical forests' ability to act as a carbon sink under future climates by performing simulations in terrestrial biosphere models (2014 – 2016) and conducting fieldwork in Panama (Summer 2013).
- Ran climate models to research anthropogenic influences on nitrogen cycling in South America at the NOAA Geophysical Fluid Dynamics Laboratory (Summer 2015).
- At the Environmental Defense Fund (Summer 2014), researched the climate effects of black carbon and of residential cook stoves in India and supported Office of Chief Scientist in partnership with Google to map methane leaks from natural gas distribution systems.

EDUCATION

Princeton University
B.A. Geosciences, 2016

University of Washington
M.S. Atmospheric Sciences, 2020

University of Washington
Ph.D. Atmospheric Sciences, 2023 (expected)

SKILLS

- Research
- Data analysis with large, multi-dimensional data (climate model output, remote sensing data)
- Data visualization
- Project management
- Science communication
- Interdisciplinary/cross-functional collaboration
- Spanish (fluent)

SOFTWARE AND PROGRAMMING LANGUAGES

- Python (including numpy, xarray, matplotlib, and cartopy packages)
- R
- Matlab
- Fortran
- ArcGIS
- Git (Github)
- Command-line scripting
- Excel

FELLOWSHIPS AND AWARDS

- DOE Computational Science Graduate Fellowship
- NSF Graduate Research Fellowship
- UW Program on Climate Change Fellowship
- UW Atmospheric Sciences Top Scholar Award
- Princeton Sigma Xi Book Award
- Princeton Benjamin F. Howell Prize
- NOAA Hollings Fellowship