

Curriculum Vitae

Jacqueline Kiszka

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Education

University of Miami Rosenstiel School – Miami, Florida Aug. 2025 – Present

Doctor of Philosophy in Meteorology & Physical Oceanography

- Advisor: Dr. Amy Clement

Pennsylvania State University – University Park, PA Aug. 2021 – May 2025

B.S. in Meteorology & Atmospheric Science; Minors in Marine Sciences and Geography

- Cumulative GPA: 3.60/4.00
- Undergraduate Honors Thesis: “The Impact of Climate Variability and Change on the California Current System Using a Pacific Pacemaker Experiment”

University of Southampton – Southampton, United Kingdom Jan. – June 2024

- Exchange semester studying Oceanography at the University of Southampton and the National Oceanography Centre Southampton (NOCS) through the Penn State Marine Sciences Program

Research Interests

Climate variability and change, air-sea interactions, large-scale climate dynamics, biogeochemistry, physical oceanography, global climate modeling

Professional Experience

NOAA Physical Sciences Laboratory – Boulder, CO June 2024 – May 2025

NOAA Ernest F. Hollings Program Intern (Advisors: Dr. Natalie Freeman & Dr. Dillon Amaya)

- Investigated the impact of climate variability, specifically ENSO, on physical and biogeochemical properties of the California Current System using a CESM2 Pacific Pacemaker Ensemble
- Interned in-person during summer 2024 and collaborated remotely during the 2024–2025 school year

NEPARS NSF Research Experience for Undergraduates – Plymouth, NH May – July 2023

Undergraduate Research Intern (Advisor: Dr. Eric Kelsey)

- Evaluating fluxes of carbon dioxide and water vapor using eddy covariance to contribute to Hubbard Brook Experimental Forest carbon and energy budget closure

PSU Dept. of Meteorology & Atmospheric Science – University Park, PA Jan. – Dec. 2023

Undergraduate Researcher (Advisors: Dr. Raymond Najjar & Dr. Maria Herrmann)

- Estimating carbon dioxide outgassing and the spatial & temporal variability of dissolved oxygen, pH, and other biogeochemical properties in the Upper Potomac River Estuary

PSU Land-Atmosphere Interaction Lab – University Park, PA Jan. – Dec. 2022

NASA PA Space Grant Consortium WISER Research Intern (Advisor: Dr. Kenneth Davis)

- Quantifying the atmospheric implications of ocean alkalinity enhancement carbon capture in the Chesapeake Bay using eddy covariance and atmospheric budgeting

Skills

Python, MATLAB, ArcGIS, LINUX, R-Studio, Microsoft Excel & Suite, Adobe Creative Cloud

Presentations

Kiszka, J., Freeman, N., Amaya, D. “Investigating the Impact of Climate Variability and Change on the California Current System Using a Pacific Pacemaker Experiment.” [13B.4] *American*

Meteorological Society Annual Meeting, El Niño-Southern Oscillation: Dynamics, Prediction and Projection II Oral Session. New Orleans, LA, Jan. 2025.

Kiszka, J., Freeman, N., Amaya, D. "Investigating the Impact of Climate Variability and Change on the California Current System Using a Pacific Pacemaker Experiment." [OS21B-08] *American Geophysical Union Fall Meeting*, El Niño-Southern Oscillation and Pantropical Climate Interactions: Mechanisms, Predictability, Impacts, and Projections I Oral Session. Washington, D.C., Dec. 2024.

Kiszka, J., Freeman, N., Amaya, D. "Investigating the Impact of Climate Variability and Change on the California Current System Using a Pacific Pacemaker Experiment." [S4-3] *Eastern Pacific Ocean Conference*, General Oceanography Poster Session. Mt. Hood, OR, Sept. 2024.

Kiszka, J., Freeman, N., Amaya, D. "Investigating the Impact of Climate Variability and Change on the California Current System." [1B-6] *NOAA Office of Education Science and Education Symposium*, Resilient Coastal Communities and Economies Oral Session I. Silver Spring, MD, Aug. 2024.

Kiszka, J., Freeman, N., Amaya, D. "Investigating the Impact of Climate Variability and Change on the California Current System." *NOAA Physical Sciences Laboratory*, Atmosphere-Ocean Processes and Predictability Division Meeting Invited Talk. Boulder, CO, July 2024.

Herrmann, M., Najjar, R., Spengler, C., **Kiszka, J.** "Upper Potomac River Estuary Contributes Disproportionately to the Carbon Dioxide Outgassing of the Chesapeake Bay" [SS19-6] *Chesapeake Community Research Symposium*, Carbon Cycling in Chesapeake Bay Special Session. Annapolis, MD, June 2024.

Kiszka, J., Shih, A., Kelsey, E. P. "Evaluating Horizontal and Vertical Fluxes in the Hubbard Brook Experimental Forest." [S66] *American Meteorological Society Annual Meeting*, Student Poster Session. Baltimore, MD, Jan. 2024.

Shih, A., **Kiszka, J.**, Kelsey, E. "Cross-Canopy Coupling In A New England Forested Mountain Valley." [S67] *American Meteorological Society Annual Meeting*, Student Poster Session. Baltimore, MD, Jan. 2024.

Kiszka, J., Shih, A., Kelsey, E. P. "Evaluating Horizontal and Vertical Fluxes in the Hubbard Brook Experimental Forest." [A430-2940] *American Geophysical Union Fall Meeting*, Boundary Layer Processes and Turbulence I Poster Session. San Francisco, CA, Dec. 2023.

Najjar, R., Herrmann, H., Spengler, C., **Kiszka, J.** "A tidal tributary contributes disproportionately to the carbon dioxide outgassing of a large, coastal plain estuary" [OS21A-05] *American Geophysical Union Fall Meeting*, Biophysical Processes in Shallow Coastal Seas and Estuaries I Oral Session. San Francisco, CA, Dec. 2023.

Kiszka, J., Davis, K. "Atmospheric Implications of Ocean Alkalinity Enhancement." *NASA PA Space Grant Consortium Research Symposium*, Oral Session I. University Park, PA, Nov. 2022.

Teaching Experience

LA 197 Course Instructor – University Park, PA

Fall 2023 & Fall 2024

- Curating weekly lesson plans and serving as an instructor for LA 197: Foundations of Scholar Success, a 1-credit class of 15 first-year Schreyer Honors Scholars that meets once per week to help students adjust to college life and learn about campus resources

Awards and Honors

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| NSF Graduate Research Fellowship Program (GRFP) Honorable Mention | 2025 |
| NOAA Ernest F. Hollings Undergraduate Scholarship Program | 2023–2025 |
| Earth & Mineral Sciences Academy for Global Experience (EMSAGE) Laureate Award | 2024 |
| Penn State Student Engagement Network Grant | 2024 |
| Penn State Schreyer Honors College International Travel Grant | 2024 |
| Penn State College of Earth & Mineral Sciences Radomsky & Ellzy Honors Scholarship | 2024 |
| Penn State Department of Meteorology Kruhoeffter Endowed Scholarship | 2024 |
| American Meteorological Society Undergraduate Freshman Scholarship | 2021–2023 |
| Penn State College of Earth & Mineral Sciences Matthew J. Wilson Honors Scholarship | 2023 |
| Penn State Department of Meteorology Landis Family Scholarship | 2023 |
| Penn State College of Earth and Mineral Sciences Jane & Don Strickler Honors Scholarship | 2022 |
| Penn State Department of Meteorology Hans A. Panofsky Scholarship | 2022 |

Relevant Coursework

- METEO 551: Physical Oceanography (Graduate Course) – Spring 2025
- GEOG 464: Advanced Spatial Analysis – Spring 2025
- METEO 422: Advanced Atmospheric Dynamics – Fall 2024
- SOES 2027: Monitoring Coastal and Estuarine Environments – Spring 2024
- METEO 436: Radiation & Climate, Honors Designation – Fall 2023

Leadership & Involvement

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| Schreyer Honors Orientation Program (SHO Time) Peer Leader and Mentor | 2022–2025 |
| Schreyer Honors College Scholar Ambassadors | 2021–2025 |
| Pride of the Lions Pep Band | 2021–2025 |
| Penn State Branch of the American Meteorological Society (PSUBAMS) | 2021–2025 |

Professional Associations

- American Meteorological Society (AMS) – 2022–Present
- American Geophysical Union (AGU) – 2022–Present
- Chi Epsilon Pi Meteorological Honors Society (XEΠ) – 2023–Present