Woods Hole Oceanographic Institution
2024 Summer Student Fellows
Research Projects

Evren Arif, Tufts University
Using Gaussian Process Regression for a Global Iodide Distribution Model
Advisor: Tristan Horner, Marine Chemistry and Geochemistry

Clara Barden, University of York, UK
Investigation into the Sea Ice System in the Beaufort Gyre
Advisor: Mike Spall, Physical Oceanography

Sean Barnier, Embry-Riddle Aeronautical University
A Stir in the Sea: Comparing Upper Ocean Responses to Tropical Cyclones
Advisor: Lisan Yu, Physical Oceanography

Akanksha Basil, Cornell University
Energy Poverty in New York City: Alternative Equity Metrics
Advisor: Yaqin Liu, Marine Policy Center

Mikayla Bechtel, Johns Hopkins University
Temporal, Spatial, and Physical Variability in Plant Spectra Across a New England Salt Marsh and Coastal Forest
Advisor: Julia Guimond, Applied Ocean Physics and Engineering

Kevin Chang, Oregon State University
Learning to Swim: Highly Parallelized Reinforcement Learning for 6-DOF Control of Thruster-driven Autonomous Underwater Vehicles
Advisor: Yogesh Girdhar, Applied Ocean Physics and Engineering

Frank Dorman, Juniata College
Total Mercury Quantification Method in Seawater via Magnetic Isotope Effect Measurements on Dissolved Gaseous Mercury Evasion
Advisor: Laura Motta, Marine Chemistry and Geochemistry

Isha Goyal, Franklin W. Olin College of Engineering
Cues and clues for healthy reefs and coral settlement
Advisor: Aran Mooney, Biology

Broden Grimm, Hampshire College
Paleoenvironmental History of the Alaska North Slope Basin
Advisor: Stephen Phillps, U.S. Geological Survey

Dominic Italiane, University of Massachusetts Boston
Analyzing the effect that graphitic carbon nitride (g-C_3N_4) has on the photodegradation of Cellulose Diacetate (CDA) in a marine environment
Advisor: Collin Ward, Marine Chemistry and Geochemistry

Amenya Jean, University of Vermont
Utilizing emerging magnetic biologging technology to detect foraging behaviors in marine predators
Advisor: Camrin Braun, Biology

Martyna Kowalska, Eckerd College
Arctic larval community composition: Abundances of benthic larvae in Rijpfjorden, Svalbard
Advisor: Kirstin Meyer-Kaiser, Biology

Jack Lundgren, Middlebury College
Container Deposit Legislation Reduces Coastal Beverage Litter
Advisor: Mike Weir, Marine Policy Center

Mollie McGibbon, Willamette University
In-situ mass spectrometry for quantification of dissolved gases in a dynamic pond
Advisor: Alan Seltzer, Marine Chemistry and Geochemistry

Seeley McGillis, Northwestern University
Bioactive Secondary Metabolite Production by Marine Fungi Associated with Mesophotic and Deep-Sea Marine Sponges
Advisor: Colleen Hansel, Marine Chemistry and Geochemistry

Blake Mincey, Harvard College
Analysis of Beaufort Gyre Freshwater Loss, 2019-2022
Advisors: Isabela Le Bras and John Toole, Physical Oceanography

Isis Mociño-Sánchez, Universidad de Guanajuato
Recent Sea-Level Rise in the Gulf of Mexico: Faster Than Ever?
Advisors: Julia Guimond, Catherine Walker and Christopher Piecuch, Applied Ocean Physics and Engineering and Physical Oceanography

Haakon Pihlaja, Pomona College
Unraveling the 2023 Record High Temperatures in the Eastern Subtropical North Atlantic
Advisor: Svenja Ryan, Physical Oceanography

Dorie Polish, Vassar College
Extreme Events Recorded in the Sediment Record of Captain's Bay, Unalaska
Advisor: Jeff Donnelly, Geology and Geophysics

Olivia Roach, Centre College
Determining the Oscillation Frequency of Icebergs with Varying Heights
Advisors: Claudia Cenedese and Alan Condron, Applied Ocean Physics and Engineering, and Geology and Geophysics

Inna Shapovalenko, Franklin & Marshall College
Development of Unmanned Surface Vessels for Surf-Zone Bathymetric Survey
Advisor: Peter Traykovski, Applied Ocean Physics and Engineering

Dakota Sievers, Louisiana State University
Geochemical Changes from Peat Rewetting with Saltwater at Duck Harbor, MA
Advisor: Meagan Eagle, U.S. Geological Survey

Livia Stein Freitas, Grinnell College
Old Texts, New Tech, Better Theory: Applying Machine Learning to Maritime Weather Data from Historical Ship Logbooks
Advisor: Caroline Ummenhofer, Physical Oceanography

Elle Thompson, Middlebury College
Investigating the uptake of polystyrene nanoplastics in zebrafish (Danio rerio) with chemically-induced colitis
Advisor: Neel Aluru, Biology

Halley Wilkinson, Smith College
Quantifying Calcite Twin Development across the Brittle-to-Ductile Transition Using Electron Backscatter Diffraction (EBSD)
Advisor: Andrew Cross, Geology and Geophysics

Caitlin Williams, Humboldt State University
Microplastic Accumulation Locations in Idealized 3-D Vortical Flows
Advisor: Irina Rypina, Physical Oceanography

Owen Wold, University of Minnesota: Twin Cities
Impact of winter ice thickness distribution on the timing of sea ice retreat in the Beaufort Sea
Advisor: Ted Maksym, Applied Ocean Physics and Engineering