

Woods Hole Oceanographic Institution
2021 Summer Student Fellows
Research Projects

Annissa Aamoum, Mount Holyoke College

Synchrony in Plankton Communities on the Northeast U.S. Shelf

Advisor: Heidi Sosik, Biology

Courtney Anderson, Stanford University

Experimental Optimization of Ricochet Separation for Microplastic Filtration Inspired by Mobula birostris

Advisor: Anna Michel, Applied Ocean Physics and Engineering

Claire Andrade, Oregon State University

Characterizing viral diversity and bacteriophage-host interactions in a meromictic pond

Advisor: Julie Huber, Marine Chemistry and Geochemistry

Ayinde Best, Wheaton College

Species Composition and Feeding Strategies at an Inactive Vent

Advisor: Lauren Mullineaux, Biology

Tirzah Blomquist, College of William & Mary

Modeling Cyclical Parthenogenesis in Rotifers: Does the Hatching Pattern Matter?

Advisor: Michael Neubert, Biology

Nicholas Catanzaro, Michigan State University

Estimating Wave Conditions from Web Cam Imagery in the Great Lakes using a Deep Neural Network

Advisor: Chris Sherwood, U.S. Geological Survey

Simon Detmer, Calvin University

High Resolution 3D Geological Mapping Using Structure-from-Motion Photogrammetry in the Deep Ocean Bathyal Zone

Advisors: Uri ten Brink and Jason Chaytor, U.S. Geological Survey

Bailey Fluegel, Northwestern University

A Magnetic Anomaly Study of Axial Seamount

Advisor: Maurice Tivey, Geology and Geophysics

Sydney Hampton, University of South Carolina

Understanding Environmental Changes and Large-Scale Climate Events through the Wandering Albatross

Advisors: Stephanie Jenouvrier, Biology, and Caroline Ummenhofer, Physical Oceanography

Brinley Harrison, United States Naval Academy

Physical and Biological Suitability of Integrating Aquaculture with Offshore Floating Wind Farms in the Gulf of Maine

Advisors: Scott Lindell and Erin Fischell, Applied Ocean Physics and Engineering

Joshua Himmer, University of Florida

A Study of Anorthite Megacrysts from the Blanco Fracture Zone, Juan de Fuca Ridge, and Southeast Indian Ridge

Advisor: Glenn Gaetani, Geology and Geophysics

Kellie Johnson, Duke University

Comparative Geospatial Analysis of Deep-Water Coral Ecosystems on Seamounts in the US Pacific Remote Islands Marine National Monument, the Adjacent US EEZ, and Areas Beyond National Jurisdiction of the Equatorial Pacific

Advisor: Tim Shank, Biology

Vincent Johnson, Oregon State University

Tropical Cyclone Variability in the Indian Ocean

Advisor: Caroline Ummenhofer, Physical Oceanography

Hailie Kittner, University of California, Santa Barbara

Analysis of Marine Microbial Nitrogen and Sulfur Cycles in the Arctic

Advisor: Maria Pachiadaki, Biology

Camryn Kluetmeier, Middlebury College

The evolution and morphology of the McMurdo Rift and A-76 Iceberg, West Antarctica

Advisor: Catherine Walker, Applied Ocean Physics and Engineering

Megan Knight, Ramapo College of New Jersey

Identification of Bottom Boundary Layers off the Coast of Southern Greenland

Advisor: Isabela Le Bras, Physical Oceanography

Mary Kule, College of Charleston

Barrier island stability and segmentation in micro-tidal environments

Advisor: Andrew Ashton, Geology and Geophysics

Corbin Lanker, The Ohio State University

Assessing and correcting estimated fCO₂ from carbonate chemistry models of the Northeastern US

Advisor: Jennie Rheuban, Marine Chemistry and Geochemistry

Öykü Mete, Dartmouth College

Distribution of Barium in Seawater: A Machine Learning Approach

Advisor: Tristan Horner, Marine Chemistry and Geochemistry

Rachel Moberg, Wellesley College

An economic valuation of recreational shellfish fisheries across Cape Cod using the travel cost method

Advisor: Yaquin Liu, Marine Policy Center

Hiroki Nagao, University of Oxford

The Deep Madagascar Basin Experiment: Understanding changes and pathways of abyssal water in the Southwestern Indian Ocean

Advisors: Viviane Menezes and Heather Furey, Physical Oceanography

Tin Nguyen, Jacobs University Bremen

Seasonal Variation and Thickness Estimation of First-year vs. Multi-year Ice in the Amundsen and Bellingshausen Seas

Advisor: Ted Maksym, Applied Ocean Physics and Engineering

Capria Nordquist, University of Notre Dame

Evaluating the Role of Fine-Scale Heterogeneity in Temperature and Flow in Spatial Patterns of Coral Mortality

Advisor: Anne Cohen, Geology and Geophysics

Jisun Reiner, Macaulay Honors College at Hunter College

Sustainable management of local glass eel resources under global aquaculture expansion

Advisor: Di Jin, Marine Policy Center

Heather Ricker, Skidmore College

Applicable estuarine data for Cape Cod aquaculture: Communicating long-term water quality trends

Advisor: Matt Long, Marine Chemistry and Geochemistry

Eric Rojas, Kutztown University

High Frequency Radio Data from Massachusetts Bay

Advisor: Anthony Kirincich, Physical Oceanography

Redmond Stein, Columbia University

Spatial Trends in Mantle Helium Fluxes to Groundwater along the San Andreas and its Companion Faults

Advisors: Peter Barry and Alan Seltzer, Marine Chemistry and Geochemistry

Shashank Swaminathan, Franklin W. Olin College of Engineering

Simulating and Evaluating Path Plans of Heterogeneous Vehicle Teams

Advisor: Erin Fischell, Applied Ocean Physics and Engineering

Hails Tanaka, College of Charleston

Characterizing ocean temperature variability on the Northwest Atlantic shelf and connecting it to barnacle larvae phenology

Advisors: Jesús Pineda, Biology, and Magdalena Andres, Physical Oceanography

Sofia Walzer, Cornell University

The Impact of Sea Level Rise on the Ecosystem Service Value of Duxbury Bay, Massachusetts

Advisor: Hauke Kite-Powell, Marine Policy Center

Emily Wong, Stanford University

*Tracking King Penguin *Aptenodytes patagonicus* population dynamics using electronic monitoring and Artificial Intelligence*

Advisor: Daniel Zitterbart, Applied Ocean Physics and Engineering