Woods Hole Oceanographic Institution
2019 Summer Student Fellows
Research Projects

Ashley Arroyo, University of Massachusetts
Rising Temperatures, Falling Isopycnals and Decreasing AOU: The Story of Abyssal Property Change at 24°S in the Atlantic (2009-2018)
Advisors: Alison Macdonald and Sachiko Yoshida, Physical Oceanography

Melissa Baldino, Duke University
Quantifying ecosystem structure and services provided by tropical seaweed farms
Advisor: Hauke Kite-Powell, Marine Policy Center

Samuel Bartusek, Princeton University
The role of coastal ocean surface fluxes during landfalling Atmospheric Rivers
Advisors: Hyodae Seo and Caroline Ummenhofer, Physical Oceanography

Laura Blum, Middlebury College
Microbial drivers of nitrogen metabolism: Searching Tara Oceans metagenomes
Advisors: Harriet Alexander and Maria Pachiadaki, Biology

Gregory Burgess, United States Naval Academy
Got Ice? A Statistical Approach to Marking Sea Ice and Atmospheric Conditions with a Low-Powered Imaging Sonar
Advisor: Richard Camilli, Applied Ocean Physics and Engineering

Mary Burnam, University of Georgia
Investigation of Ocean Flows using Remotely Sensed (Drone) Videos of the Sea Surface Analyzed using Particle Image Velocimetry (PIV)
Advisors: Britt Raubenheimer and Steve Elgar, Applied Ocean Physics and Engineering

Siyuan-Sean Chen, University of Bristol
Insights into Cycling of 231Pa and 230Th in Benthic Nepheloid Layers of the Western North Atlantic Ocean
Advisor: Olivier Marchal, Geology and Geophysics

Solomon Chen, University of Hawai'i at Manoa
PhRePhOx: An in-situ approach to quantifying carbon cycling processes
Advisor: Matthew Long, Marine Chemistry and Geochemistry

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Lisa Coe, University of Pittsburgh
Phosphate may be fully reduced to phosphine gas in anoxic seawater
Advisor: Ben Van Mooy, Marine Chemistry and Geochemistry

Meagan Currie, Swarthmore College
Direct Seeding: Examining the effect of strain variation and developmental stage of Sugar Kelp Saccharina latissimi
Advisor: Scott Lindell, Applied Ocean Physics and Engineering

Marcella da Costa, Saint Augustine's University
Analysis of Waquoit Bay Phytoplankton Diversity and Abundance Using Multiple Methods
Advisor: Rebecca Gast, Biology

Sally Dowd, University of California Berkeley
Conserving a Sea of Shadow and Substance: Should there be a Moratorium on the Harvest of Twilight Zone Fish?
Advisor: Porter Hoagland, Marine Policy Center

Irene Duran, California State University, Chico
Creating a Light Fixture to Model the Lights and Cameras on an AUV
Advisors: Chris Rauch and Gwyneth Packard, Applied Ocean Physics and Engineering

Marta Faulkner, Cornell University
Periodically-forced ice thickness and drift in the eastern Arctic: an analytical approach
Advisor: Michael Spall, Physical Oceanography

Mariya Galochkina, Rutgers University
Benthic δ18O evidence for the transfer of Common Era surface temperature anomalies via North Atlantic Deep Water
Advisor: Delia Oppo, Geology and Geophysics

Erica Herrera, The University of Texas at El Paso
Exploring Microbial Food Web Dynamics across Transition Zones
Advisor: Julie Huber, Marine Chemistry and Geochemistry

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Anne Kroo, Franklin W. Olin College of Engineering
Single Hydrophone Localization
Advisor: Erin Fischell, Applied Ocean Physics and Engineering

Gibson Leavitt, Roger Williams University
Influence of extratropical storms on coastal processes of an inlet on the eastern coast of Florida
Advisor: John Warner, U.S. Geological Survey

Jonathan Low, University of Tampa
Analyzing spatial variations of zooplankton community size structures on the Northeast US Shelf
Advisor: Joel Llopiz, Biology

Sara Matsumura, Haverford College
Microplastics in New Bedford Harbor
Advisor: Anna Michel, Applied Ocean Physics and Engineering

Noreen McNamara-Bordewick, Barnard College
Metabolic Enzyme Activity over a Daily Cycle in Vertically Migrating Copepods
Advisor: Ann Tarrant, Biology

Shuai Meng, Ocean University of China
Evolution and Seasonal Variability of Gulf Stream Warm Core Rings
Advisor: Ke Chen, Physical Oceanography

Jennifer Necker, Eckerd College
Novel manganese oxidation along the Quashnet River
Advisors: Scott Wankel and Colleen Hansel, Marine Chemistry and Geochemistry

William Nguyen, University of Maryland, College Park
Applications of the Radium Quartet to Quantify Water Exchange in Salt Marshes
Advisor: Matthew Charette, Marine Chemistry and Geochemistry

Alexandra Nordyke, Bennington College
Determining magma storage depths and ascent rates from volatiles in olivine-hosted melt inclusions
Advisor: Glenn Gaetani, Geology and Geophysics

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Henry Nye, Haverford College
Assessing the Statistical Uniqueness of the Younger Dryas: A Robust Multivariate Analysis
Advisor: Alan Condron, Geology and Geophysics

Virginia Pan, Duke University
Dense Beach Surveying Using Stereo Camera and Post-Processing Kinematic GPS
Advisor: Peter Traykovski, Applied Ocean Physics and Engineering

Ellen Park, Cornell University
Zombie Coral: What can Jarvis 497 teach us about corals surviving climate change?
Advisor: Anne Cohen, Geology and Geophysics

Madison Schumm, The University of Texas at Austin
*The effect of pile driving noise on mating behavior in squid (*Doryteuthis pealeii*)*
Advisor: Aran Mooney, Biology

Sarah Stopak, Oberlin College
Quantifying the Importance of Ice-Rafted Debris to Salt Marsh Sedimentation in Plum Island Ecosystems Long-Term Ecological Research Site
Advisor: Neil Ganju, U.S. Geological Survey

Riley Wadehra, Colorado College
The Influence of Seasonal River Runoff on Sea Level Variability
Advisor: Christopher Piecuch, Physical Oceanography

Matthew Whittaker, North Carolina State University
Metamorphosis of larval Crepidula plana *in response to turbulent flow*
Advisor: Lauren Mullineaux, Biology

Weiguang Wu, University of California, San Diego
Directional Wavenumber Spectrum of Ocean Internal Waves
Advisor: J. Thomas Farrar, Physical Oceanography