



1. Johann Becker

Affiliation: University of Rhode Island

Current Position: Graduate Student

Field of Interest/Expertise: Engineering & Ocean Technology, Sensor Development

Research Interests: My research focuses on developing and deploying distributed sensing technology for oceanographic exploration. Recently, my work has focused on developing distributed temperature sensing (DTS) equipment and procedures to perform holistic hydrothermal vent field temperature measurements.

2. Virginia Biede

Affiliation: Florida State University

Current Position: Graduate Student

Field of Interest/Expertise: Macrobiology, Deep Sea Ecology

Research Interests: As a benthic ecologist, I am interested in the functioning of the seafloor. As a human in the 21st century, I am concerned about lasting anthropogenic disturbance. My research combines current issues such as fishing, mining, and climate change and the disturbance, recovery, and ecology of the deep seafloor, especially seamounts in the North Pacific.

3. Andrew Branch

Affiliation: Jet Propulsion Laboratory, California Institute of Technology

Current Position: Mid-Career Technologist (8 years since BSc)

Field of Interest/Expertise: Engineering & Ocean Technology

Research Interests: My primary oceanographic research interests are developing autonomous sampling algorithms to increase the efficiency of AUV operations and enable exploration of extreme environments (Under Ice, Ocean Worlds). I have primarily focused on hydrothermal venting, but have also targeted other physical oceanography features such as ocean fronts.

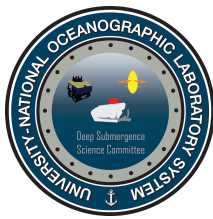
4. Alexis Breger

Affiliation: George Mason University

Current Position: Graduate Student

Field of Interest/Expertise: Microbiology

Research Interests: My research interests include bioluminescent symbioses, particularly within deep sea organisms. I am also interested in expanding my work into the deep to investigate how nutrient and oxygen availability influences microbial dynamics as well as how microbes cycle nutrients at depth.



5. Mary Burkitt-Gray

Affiliation: Woods Hole Oceanographic Institution

Current Position: Post-Doc

Field of Interest/Expertise: Sensor Development, Chemistry

Research Interests: I develop and deploy novel analytic and sensing techniques for oceanography, ranging from optical salinity sensors to ocean bottom pressure to primary productivity fluorometers to dye tracing. Due to my background in inorganic chemistry, I am particularly interested in interdisciplinary research where new detection techniques can reveal previously unknown chemical properties of the ocean.

6. Elena Ceballos

Affiliation: Woods Hole Oceanographic Institution

Current Position: Post-Doc

Field of Interest/Expertise: Biogeochemistry

Research Interests: The movement of carbon through the ocean plays a major role in regulating the Earth's climate—yet scientists don't yet understand exactly how this cycle works. The ultimate purpose of my research is to contribute to better quantifying the role of the oceans in the global carbon cycle. I aim at increasing the precision of the carbon export assessments in the oceans via the Biological Carbon Pump. To that purpose, I use high resolution underwater cameras, UVP (Underwater Vision Profiler) type, for particle imaging coupled to a novel autonomous platform that acts as a sediment trap.

7. David Davis

Affiliation: Rutgers University

Current Position: Graduate Student

Field of Interest/Expertise: Geology, Microbiology, Biogeochemistry

Research Interests: My research interests are in microbe-mineral interactions in extreme environments such as hypersaline lakes and hydrothermal systems. I am most interested in understanding the relationship between archaeal cell surfaces and mineral formation at and around deep-sea hydrothermal vents.

8. Chenoa DuBree

Affiliation: Florida State University

Current Position: Graduate Student

Field of Interest/Expertise: Biological Oceanography (Meiofauna)

Research Interests: I am interested in investigating deep seafloor marine life, specifically meiofauna community ecology (like nematodes). I also just like deep sea marine life in general.

9. Fanny Girard

Affiliation: University of Hawai'i

Current Position: Early Career Scientist (0-5 years since Ph.D. or equivalent)

Field of Interest/Expertise: Macrobiology



Research Interests: I am a deep-sea benthic ecologist interested in the temporal and spatial dynamics of vulnerable marine ecosystems (e.g., deep-sea coral ecosystems). My research primarily aims to develop and use non-destructive methods (e.g., high resolution imagery) to evaluate benthic ecosystem resilience to human activities and environmental change.

10. Julia Hunckler

Affiliation: Hawaii Pacific University

Current Position: Graduate Student

Field of Interest/Expertise: Microbiology

Research Interests: My research involves the anaerobic cultivation of microbial communities within the oceanic basement crustal fluids and the introduction of viruses from the aquifer to identify and isolate virus-host systems, specifically those involving viruses that infect thermophilic archaea. By cultivating viruses from the basaltic deep seafloor biosphere and isolating virus-host systems via induction and viral challenges, my research aims to confirm links of novel viral sequences to archaeal hosts.

11. Jeremy Horowitz

Affiliation: Smithsonian Institution

Current Position: Post-Doc

Field of Interest/Expertise: Taxonomy/genetics and bioinformatics

Research Interests: I leverage Remotely Operated Vehicle (ROV) expeditions to collect black corals. I use the locational and video data, and integrate morphological and molecular data to taxonomically review and revise black corals, most commonly deep sea black corals. I am also researching the range extents of black coral species, which is also being used to revise the taxonomy of the group.

12. Ashley Marrassino

Affiliation: NOAA Ocean Exploration | UCAR

Current Position: Mid-Career Scientist (6-15 years since Ph.D.)

Field of Interest/Expertise: Macrobiology

Research Interests: My research has focused on biological adaptations in deep-sea environments. In my current role with NOAA Ocean Exploration, however, I am interested in broader ocean exploration, plugging into the research community, and learning about the tools available to conduct research in the deep sea.

13. Roland Ovbiebo

Affiliation: Scripps Institute of Oceanography

Current Position: Graduate Student

Field of Interest/Expertise: Physical Oceanography, Biogeochemistry



Research Interests: I'm interested in studying the biogeochemical cycle of the ocean. I want to know how heavy metal contaminants impact the interplay within the marine food web and their pathway to the human food chain.

14. Rendhy Sapile

Affiliation: University of Rhode Island

Current Position: Graduate Student

Field of Interest/Expertise: Engineering and Ocean Technology

Research Interests: Applications of fisheries acoustics for understanding ocean vehicle animal avoidance, active and passive acoustics, remotely operated vehicles, mesopelagic animals, deep scattering layers.

15. Mitchell Sarina

Affiliation: University of Tennessee - Knoxville

Current Position: Graduate Student

Field of Interest/Expertise: Microbiology, Bioinformatics

Research Interests: Broadly, my primary research interest is linking deeply sourced microbial life to the large-scale geologic process of subduction. Specifically, my work focuses on understanding how serpentinization-derived volatiles from deep-sea mud volcanoes, such as H₂, CH₄, and H₂S, can support microbial communities living deep within Earth's crust. I am passionate about developing deep-sea sampling strategies that are compatible with cutting-edge microbial analysis techniques.

16. Alyssa Schultz

Affiliation: Texas A&M University

Current Position: Graduate Student

Field of Interest/Expertise: Biogeochemistry

Research Interests: I utilize deep sea corals as paleoceanographic archives investigating seawater pH over millennial timescales. My research is centered on enhancing our understanding of the resilience of deep-sea coral ecosystems utilizing a cross-disciplinary approach. I aim to bolster both predictive and protective measures for these invaluable ecosystems that offer a multitude of services.

17. Man Yin Tsang

Affiliation: University of Washington

Current Position: Post-Doc

Field of Interest/Expertise: Geology, Biogeochemistry

Research Interests: My research interest lies in the composition of fluids and the timing of fluid flows in tectonic margins. My studies aim to discern the influence of fluids on mineralization,



the deep biosphere and seismic activities. The samples I frequently use include rocks from hydrothermal vents and cold seeps, as well as subseafloor sediment cores and their porewater.

18. Claudia Francesca Vaga

Affiliation: Smithsonian Institution

Current Position: Post-Doc

Field of Interest/Expertise: Marine Biology/Zoology

Research Interests: My research uses an integrative approach, that couples phylogenomic, ecological and functional traits observations, bioinformatics, and morphological analysis to tackle questions about the biodiversity and evolutionary history of cnidarians taxa with a focus on deep sea corals. I am most interested in enhancing our knowledge of the benthic fauna in poorly understood marine environments, with a broad look to their associated and symbionts. I am mostly interested in the description of new taxa (both at the species or higher levels) and the study of the relationship within and between them.

19. Adela Roa-Varon

Affiliation: Smithsonian Institution, National Museum of Natural History

Current Position: Early Career Scientist (0-5 years since Ph.D. or equivalent)

Field of Interest/Expertise: Macrobiology, Ichthyology

Research Interests: I am an ichthyologist who addresses broad evolutionary questions with classical and cutting-edge morphological, genetic, and geochemical techniques, along with the curation of museum specimens in my research. I seek to understand the factors that have shaped the diversification and evolution of marine ray-finned fishes. As a museum research scientist at the Smithsonian's National Museum of Natural History (NMNH), I am the lead scientist on four research projects involving fish identification, multiscale phylogenomics, population genetics, and otolith microchemistry. These projects include lab work and data analyses; mentoring students; manuscript writing; dissemination of results; and outreach and education.

20. Johanna Weston

Affiliation: Woods Hole Oceanographic Institution

Current Position: Post-doc

Field of Interest/Expertise: Macrobiology, Sensor Development

Research Interests: I investigate processes that generate and maintain biodiversity, mainly focusing on benthic invertebrates that thrive in deep ocean ecosystems, like the subduction trenches that plunge to depths >6000 m. Using the widely accessible and diverse Crustacean order as a model system, I generate and test hypotheses regarding: (1) how does geology and the environment influence community composition and drive, or limit, population connectivity,



2024 DeSSC New User Program Participants

17, 18 Feb 2024

Tulane University at New Orleans

(2) how have species diversified over evolutionary time, and (3) how are species impacted or likely to be impacted by human activities.

18. Laurel Yohe

Affiliation: UNC Charlotte

Current Position: Mid-Career Scientist (6-15 years since Ph.D.)

Field of Interest/Expertise: Macrobiology, Microbiology, Biogeochemistry, Genomics

Research Interests: I am an evolutionary biologist, with a newly exposed passion for Earth history and the ocean. The central research focus of my lab is coined “life on the edge”. I use a combination of genomics, microscopy, and modeling techniques to understand animals with extreme adaptations. While most of my past research has focused on terrestrial systems, through initial collaborations, I have applied my methods to animals living in hydrothermal systems—among the most extreme environments on earth—and I have henceforth fallen in love with deep sea biology.