University-National Oceanographic Laboratory System

~UNOLS~

DeSSC New User Participants

Part I
Jeanine Ash to Autumn Kidwell
Jeanine Ash

I use isotope geochemistry to investigate molecular gas cycling from the mantle to the atmosphere. Let's talk if you have gases I can measure and/or are interested in working on proposals together!

jeanine.ash@rice.edu   @strangeisotopes
Skylar Bayer

**Previous Research:**
- East Pacific Rise invertebrate community succession, reproduction, larval dynamics (M.S.)
- Maine sea scallop fertilization, spawning, population dynamics, eDNA detection (Ph.D. +)

**Future interests:**
- Seeking post-doc positions
- Seeking collaborators, especially on invertebrate (molluscan) eDNA detection and collection projects
WHAT CAN CALCAREOUS FORAMINIFERA TELL US?
Ashley Burkett
Boone Pickens School of Geology
Oklahoma State University

• Benthic foraminifera
• SEA³s (Seafloor Epibenthic Attachment Cubes)
• Looking for collaborators!!
• ashley.burkett@okstate.edu
EMILY CHUA

RESEARCH EXPERIENCE

2012-2015: Dept. of Oceanography, Dalhousie University (Halifax, Nova Scotia)
2014: Woods Hole Oceanographic Institution (Summer Student Fellow)
2015 – present: Ph.D. student at Boston University (Advisor: Wally Fulweiler)

PH.D. PROJECT

Developing a porewater sampling system/underwater mass spectrometer (POSUMS) to measure dissolved gases in permeable sediment porewater in situ

FUTURE PLANS

…Check back in ~2 years
Matthew Cook
PhD candidate, expected completion 2019
Scripps Institution of Oceanography University of California, San Diego

- Ocean bottom pressure instrumentation
- Seafloor geodesy at subduction zones, spreading centers
- Distinguishing tectonic signals from oceanographic signals (inter-, co-, post-seismic, slow slip from currents, eddies, etc.)
Allisa Dalpe
Ocean Engineering Ph.D. Candidate, University of New Hampshire
B.A. Connecticut College, 2016, Physics

Research at UNH:
Development of Collaborative Multi-Domain Marine Vehicles for Autonomous System Testing
• Objective: Establish an autonomy testbed for rapid test/evaluation of different autonomies, sensors, and payloads
• Robotic vehicles include:
  • Autonomous Surface Vehicles (ASVs)
  • Remotely Operated Vehicles (ROVs) acting as tethered Autonomous Underwater Vehicles (AUVs)
• Seafloor mapping will be used as the proof-of-concept mission

Specific Research Interests:
• Autonomous decision-making, mission planning, obstacle avoidance

Looking for:
• Opportunities to gain offshore engineering experience with ROVs/AUVs/DSVs as a graduate student
• Career goal is to work as an operations/expedition leader for marine robotic vehicles
Christopher Doorn

Geology Ph.D. Student
University of Wyoming
Advisors: Drs. Mike Cheadle and Barbara John

Research interests:
• Mid-ocean ridge processes
• Heat flow in ocean crust

Projects:
• Generation of lower ocean crust exposed at Pito Deep
• Zircon geochronology

> 400 in-situ rock samples collected from the lower crust at Pito Deep
Marie Farson

• PhD in Oceanography Scripps Institution of Oceanography

• Geophysical research with Dr Spiess’s Deep Tow program

• Dove in Sea Cliff to 5,900’ for thesis research

• Engineer and Ops for Deep Ocean Engineering on Deep Flight, Phantom ROVs

• Overseas as Navy spouse & worked for State Department

• Teaching Earth Science & Engineering at Principia College

• Interested in collaboration on joint research initiatives
What processes disperse the products of submarine volcanic eruptions?

PhD studies: Why does pumice float? How do pumice rafts form?

Postdoc work: How do mid-ocean ridge eruptions create and disperse fragments of volcanic glass?
Dr. Rose M. Jones
Environmental Microbiologist

Bigelow Laboratory for Ocean Sciences

rjones@bigelow.org
rosemjones.com
@DrRoseJones
Autumn N. Kidwell

• Engineering Scientist at the Applied Research Laboratories at the University of Texas since 2016
• Experience with AUV operations in shallow and constrained environments
• Education:
  • B.S. in Ocean Engineering from Texas A&M University in 2009.
  • M.C.E. in Ocean Engineering at the University of Delaware in 2011 for work on near-shore sediment transport
  • Ph.D. from the University of Delaware in Oceanography in 2016 for work on the dynamics of the tropical Pacific Ocean
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Part II
Yang Liao to Kristin Yoshimura
Yang Liao
yliao@whoi.edu

Department of G&G, Woods Hole Oceanographic Institution

Research Tools
Fluid dynamics / Material Sciences / Newton’s 2nd law / Stability analysis

Research Interests
• Physical Volcanology — chamber & conduit dynamics
• Hydrothermal circulations on & beyond earth
• Geophysical fluid dynamics & simple experiments
• Turbulent flows, ........

Looking for —
• Collaborators and ideas
• Observation and data that could benefit from and/or test analytical models
Emma McCully - MS Student at Boise State University -

I am working with Dr. Dorsey Wanless, looking at along and across-axis chemical variability at the MAR ~14°N

I hope to continue utilizing deep submergence facilities in future research
Nwankwo, Uchenna Chizaram

• Presently a PhD student at USM
  • My current research is offshore GNSS-MR

• Research experiences
  • Land surveying
  • Hydrography
  • Physical Oceanography

• Future research interest
  • Operation of remotely operated vehicles and autonomous underwater vehicle
Gustavo A. Ramírez

**Affiliation:** Postdoc at the University of Rhode Island, Graduate School of Oceanography.

**Research:**

3. Long-term Microbiological and Chemical Monitoring
4. Extracellular DNA in Marine and Terrestrial Habitats

**Next:** Looking for a job.

Thanks!
Aspen T. Reese
Junior Fellow, Harvard
areese@fas.harvard.edu

Research interests
• Ecology of the gut microbiota
• Role of the microbiota in host acclimation and adaptation

Current projects
• Dynamics of microbiota in diel migrating invertebrates
• Microbiota responses to climate change
• Impacts of domestication on the microbiota
Jennifer Salerno, Ph.D.

- Assistant Professor, Department of Environmental Science and Policy, George Mason University

- Environmental microbiologist (deep sea inverts, shallow and deep corals, biofilms, soil, sediment, oysters, built environment, maybe bees)

- Looking for graduate students!!!

- E-mail: jsalerno@gmu.edu
Cherise Spotkaeff

Masters Student at Hawaii Pacific University

Advisor: Dr. Olivia Nigro

Email: cspotkae@my.hpu.edu

Research Interests: Marine Microbiology

Current Research: Deep subsurface Viruses
“Science is a force for social justice.”

James Townsend
PhD, June ’18

I’m interested in,

- Postdoc opportunities and collaborations on the above, etc.
- Increasing access to research facilities and opportunities for 1st gen/minority students
- Promoting the social relevance of marine exploration and biodiversity

Current: Biophysicist, ctenophorologist, baby taxonomist
Future: Molecular phylogenetics, gut microflora, microplastics
Benjamin Tully

Postdoc at the Center for Dark Energy Biosphere Investigations

Currently looking for: Faculty position

Interests:

• Microbial ecology and genomics in marine environments spanning from the surface ocean to subseafloor crustal environments
  • Future endeavors to examine microbial ecology of particle attached organisms through the deep water column and sediments

• Application of large-scale “omic” techniques – metagenomics and metatranscriptomics

Experience:

• Oligotrophic sediments – South Pacific Gyre & subseafloor crustal environments – North Pond
Alexis M. Weinnig  
PhD Candidate, Temple University  
aweinnig@temple.edu

Shipboard Operations and Collections

Live Cold-Water Coral Experiments

Molecular Analysis

- Step 1: Extract and Sequence RNA
- Step 2: Align and Quantify
- Step 3: Analyze Differential Gene Expression Across Treatments

Postdoc Summer/Fall 2020

Cold-water coral microbiome

Influence of surrounding environment/conditions on coral persistence
Subbarao Yelisetti, Assistant Professor

What I work on
• Marine gas hydrates
• Submarine landslides
• Seismic crustal structure of the continental margins – earthquakes, oil and gas

What tools I use
• Seismic reflection and refraction – Travel time and full waveform inversion
• Bathymetry, magnetics, gravity
• Physical properties of sediments

• Interested in plate tectonics and geophysical structure
• Looking for collaborators
Kristin M. Yoshimura
kristiny@udel.edu
@kmyoshimura

**Education:** PhD candidate @ UD with Dr. Jennifer Biddle

**Expertise:** Microbial ecology and metagenomics

**Dissertation focus:** Particle-associated microbes from estuaries to deep sea and development of sediment communities

**Interested in:** Genomics and activity of microbes in deep sea and sediment environments & implications on geochemical cycling

**Experience:** DSV Alvin, ROV Jason

**Graduating:** Feb 2019- looking for post doc!