2017 Fall Symposium
Swimming in Confidence: Declaring your Scientific Authority
Friday, November 3rd, 2017
Redfield Auditorium, Woods Hole Oceanographic Institution, Woods Hole, MA

Schedule:

8:30 - Check in and breakfast

9:00 - Welcoming remarks by Dr. Larry Madin, Vice President for Research at WHOI

9:15 - Keynote by Dr. Amala Mahadevan: "By Choice"

10:15 - Coffee break

10:30 - Panel discussion: Interrogating the "Leaky Pipeline"
Dr. Meg Tivey, Dr. Paula Bontempi, Dr. Heather Benway, Dr. Pam Neubert
Dr. Tracey Dalton (moderator)

12:00 - Lunch and small group discussions

13:30 - Research Spotlights
Dr. Isla Castañeda: Using ancient lipids to reconstruct past sea surface temperatures: an example from the northwest Australian shelf
Dr. Elsie Sunderland: Bioaccumulative contaminants in the Arctic Ocean in a Warming Climate
Dr. Susanne Menden-Deuer: Swimming in diversity: linking plankton ecology with biogeochemical cycles
Dr. Kate Lowry: Phytoplankton Bloom Dynamics in the Changing Arctic Ocean

15:00 - Coffee and snack break

15:15 - The Journey to Confidence
Dr. Caroline Solomon: Swimming Against the Tide
Dr. Andone Lavery: Acoustical Imaging of the Ocean
Alexa Dayton: White cap in a sea of black: finding my voice as a female scientist
Dr. Sucharita Gopal: Lean In – Creating Global Environmental Science Networks:
Why sharing, collaborating and mentoring matters.

17:00 - Evaluation and Closing remarks

Keynote Talk: "By Choice"

Amala Mahadevan
Senior Scientist, WHOI

Dr. Mahadevan is a physical oceanographer with interests in climate, the oceanic carbon cycle, and biogeochemical distributions. She uses modeling and analysis of field data to investigate physical ocean processes and their implications on the productivity and distribution of phytoplankton, and the transport and mixing of properties. She has held faculty, visiting faculty, or research positions at Woods Hole Oceanographic Institution, Boston University, Harvard University, the University of Massachusetts- Dartmouth, the Institute for the Study of Earth, Oceans and Space, and the University of Cambridge. She received her B.E. in Civil Engineering from VJTI University of Mumbai (1987) and her M.S. (1989) and Ph.D. (1994) in the Environmental Fluid Mechanics Laboratory and program in Scientific Computing and Computational Mathematics at Stanford University.

Panel Discussion: Interrogating the "Leaky Pipeline"

Moderator: Tracey Dalton *Professor & Chair, Marine Affairs Department, University of Rhode Island*

Margaret (Meg) K. Tivey
Vice President for Academic Programs and Dean, Woods Hole Oceanographic Institution

Dr. Tivey is a Senior Scientist at WHOI, where she was also Associate Dean from August 2010- October 2017, and is now the Vice President for Academic Programs and Dean. Tivey's research is focused on seafloor hydrothermal systems. She studies active vents throughout the world, using occupied submersibles and remotely-operated vehicles to access the vent sites. She has authored or co-authored more than 50 scientific papers, including several for general audiences. She was a Ridge2000 Distinguished Lecturer in 2004, and the American Geophysical Union (AGU) Ocean Sciences Section Rachel Carson Lecturer in 2005. She was awarded WHOI's Arnold B. Arons Award for Excellence in Teaching, Advising, and Mentoring in 2010. She received her Bachelor of Science degree with distinction at Stanford University in Geology (1980), and M.S. (1983) and Ph.D. (1989) degrees in Geological Oceanography at the University of Washington.

Paula Bontempi
Program Manager, Ocean Biology and Biogeochemistry, NASA

Dr. Paula Bontempi has been a biological oceanographer for 25 years. She began her career at the New England Aquarium as an undergraduate at Boston College, later entering the fields of phytoplankton taxonomy and physiology in the Department of Oceanography at Texas A&M University. Research on phytoplankton taxa and coupled physical and biological drivers of global and regional phytoplankton spatial patterns led to interests in marine bio-optics and ocean color remote sensing (mostly because she was certain ocean color remote sensing didn't work). She graduated from the University of Rhode Island's Graduate School of Oceanography in 2001 with a Ph.D. She moved from the faculty at the University of Southern Mississippi to NASA Headquarters in 2003. She is currently the program manager for Ocean Biology and Biogeochemistry at NASA Headquarters, as well as the Lead for NASA's Carbon Cycle and Ecosystems Focus Area and the agency's Carbon Cycle Science research. Her favorite job is being a mother, ice skating, roller skating, and skateboarding with her son (and is thankful that the 10-year-olds at the skate parks take pity on her). She is glad to put some organic chemistry to use frequently building exploding volcanoes in her kitchen with her son.

Pamela (Pam) Neubert
Associate Vice President of Marine Science, AECOM

Dr. Neubert is a program manager, benthic marine ecologist, and invertebrate taxonomist with expertise in ecological impact assessment of marine nearshore and offshore environments. She has dedicated her career of 20 years toward successfully working in estuarine to deep-sea habitats designing and implementing field programs, directing these programs, and analyzing resulting data. Pamela currently serves as AECOM's Associate Vice President of Marine Science and maintains a Guest Investigator appointment at WHOI in the Marine Policy Center. She is currently serving on the U.S. National Academy of Sciences Steering Committee to assess impacts to marine fisheries and benthic communities from offshore wind energy development. She serves on the New England Marine and Coastal Environmental Business Council and is a scientific reviewer for the North Pacific Research Board. She was President of the New England Estuarine Research Society, a governing board member of the Coastal and Estuarine Research Federation, has served as a Chairperson for Women's Leadership Committees, and has participated on science panels for the National Science Foundation and the U.S. Office of Naval Research. These opportunities have allowed her to interface with a large network of people interested in marine conservation, preservation, and restoration.

Heather Benway
Executive Officer, Ocean Carbon & Biogeochemistry Program

With two graduate degrees in oceanography, Heather has conducted research on nutrient cycling in the Gulf of Maine and paleoceanography in the tropical Pacific and North Atlantic. The highlight of her research career was sailing on ocean drilling cruises between Chile and Panama to collect deep-sea sediments Between her M.S. and Ph.D. programs, Heather did a Knauss Marine Policy fellowship at NOAA, where she first became interested in how science programs come together and how research is funded. At the conclusion of her postdoctoral research at WHOI in 2007, Heather's knack for program management and broader interest in scientific planning and policy prompted her to assume a leadership role in the newly established Ocean Carbon & Biogeochemistry (OCB) Project Office. OCB (@us_ocb) is a network of scientists who work across disciplines of ocean chemistry, biology, and physics, to understand the ocean's role in the global carbon cycle and the response of marine ecosystems and biogeochemical cycles to environmental change. Heather and her small team in the OCB office work closely with scientists, federal agency managers, and other partners to cultivate new research areas and funding opportunities. Read more about Heather's scientific career journey here.

Innovative Research Talks

Isla Castañeda
Associate Professor, University of Massachusetts Amherst

Dr. Castañeda is an Associate Professor in the Department of Geological Sciences at UMass Amherst. Her main research interests lie in on utilizing molecular (organic geochemical) and isotopic proxies to examine past environments. Previously, she was a post-doc in the Department of Marine Organic Biogeochemistry at the Royal Netherlands Institute for Sea Research (NIOZ). She received her PhD from the University of Minnesota (Large Lakes Observatory), her master's degree from the University of Colorado at Boulder (INSTAAR) and her bachelor's degree from Syracuse University (Department of Earth Sciences).

Elsie Sunderland
Associate Professor, Harvard University

Dr. Elsie Sunderland is the Thomas D. Cabot Associate Professor of Environmental Science and Engineering in the John A. Paulson School of Engineering and Applied Science at Harvard University. She holds a secondary appointment in the Department of Environmental Health in the Harvard T.H. Chan School of Public Health. Dr. Sunderland's research group studies the biogeochemistry of global contaminants. Her work aims to better understand how global contaminants are distributed in the environment and how global climate change and industrial development will affect future health risks.

Susanne Menden-Deuer
Professor, University of Rhode Island

Dr. Susanne Menden-Deuer is a seagoing oceanographer, with research interests focused on marine planktonic food web structure and function. Research in Dr. Menden-Deuer's group combines in-situ work in the temperate and polar ocean of primary production and phytoplankton mortality, laboratory measurements of plankton behavior and physiology and theoretical modeling work to establish linkages between microscopic events (e.g. predator movements) and macroscopic phenomena (e.g. phytoplankton production and distributions). Since 2008, Dr. Menden-Deuer has been a member of the faculty of the Graduate School of Oceanography at the University of Rhode Island. Before coming to URI, Dr. Menden-Deuer was a research fellow at Princeton University with Simon Levin and a Lecturer at Western Washington University. She received her Ph.D. in 2004 and a M.Sc in 1998 both in Oceanography at the University of Washington with Daniel Grünbaum and Evelyn Lessard, respectively. She received her first degree in 1996 from the University of Bonn, Germany, with research done with Victor Smetacek at the Alfred Wegener Institute of Polar and Marine Sciences. Dr. Menden-Deuer serves on the editorial boards of oceanographic publications and the Board of Directors of the Association for the Sciences of Limnology and Oceanography (ASLO).
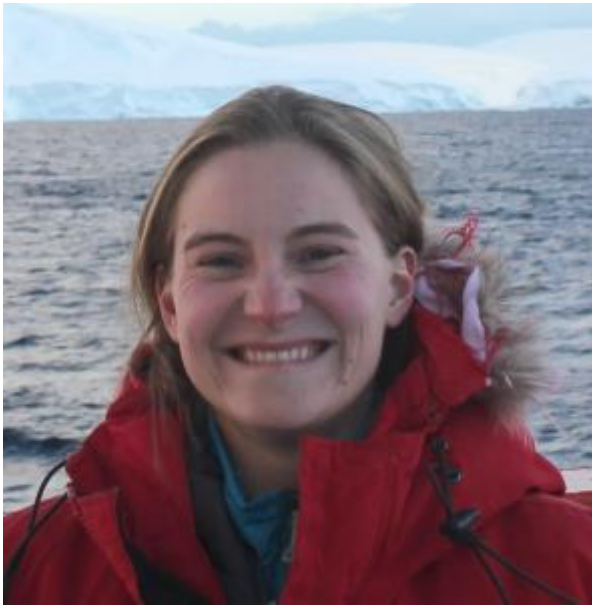
Kate Lowry
Postdoctoral Scholar, Woods Hole Oceanographic Institution

Dr. Kate Lowry received her PhD in Environmental Earth System Science from Stanford University in January 2017. Her dissertation is titled "The influence of sea ice and hydrography on the timing, distribution, and intensity of phytoplankton blooms in the rapidly changing Chukchi Sea (Arctic Ocean)." In December 2016, she began her postdoctoral fellowship at WHOI, co-advised by Dr. Amala Mahadevan, Dr. Carin Ashjian, and Dr. Bob Pickart. As a sea-going oceanographer with extensive experience in polar regions, she has continued to research the physical drivers of phytoplankton bloom dynamics in the field during her time at WHOI, most recently by assessing phytoplankton community composition and nutrient availability as part of a larger ecosystem study during the Beaufort Shelf Upwelling project, led by Dr. Carin Ashjian.

Path to Confidence Talks

Caroline Solomon
Professor and Faculty Senate Chair, Gallaudet University

Dr. Solomon has been a faculty member at Gallaudet since 2000. She also is an adjunct at the University of Maryland Center for Environmental Science, and serves on masters and doctoral committees for research on increasing participation of deaf and hard of hearing people in STEM and estuarine science especially in the areas of nutrient and microbial dynamics. Her education background includes a B.A. in Environmental Science and Public Policy from Harvard University, M.S. in Biological Oceanography from the University of Washington, and a Ph.D in Biological Oceanography from the University of Maryland.

Andone Lavery
Associate Scientist, Woods Hole Oceanographic Institution

Andone C. Lavery received the B.A. degree in mathematics from Cambridge University, in 1991 and the M.Sc. (1995) and Ph.D. (1999) degrees in physics from Cornell University. She held postdoctoral positions with the Woods Hole Oceanographic Institution (WHOI) and the Office of Naval Research (ONR) Ocean Acoustics. Since 2002, she has been a Member of the Scientific Staff, Department of Applied Ocean Physics and Engineering, WHOI. Her research interests include high-frequency acoustic scattering and propagation in discrete and random media, developing physics-based acoustic scattering models for marine organisms and small scale fluid processes, performing laboratory measurements for validating scattering models, developing instruments and signal processing methods for ocean measurements of scattering from biologics and physical processes. Dr. Lavery is a Fellow of the Acoustical Society of America, and a member of the Oceanography, IEEE and American Physical Society. She has served for six years as Associate Editor for the Journal of the Acoustical Society of America Express Letters and was awarded the Acoustical Society of America Medwin Prize in Acoustical Oceanography in 2014 and the Munk Award in 2017 by the Oceanography Society for distinguished research in oceanography related to sound and the sea.

Sucharita Gopal
Professor, Boston University

Dr. Sucharita Gopal's research is multidisciplinary dealing with spatial analysis and modeling, GIS, data mining and information visualization and artificial neural networks. She has applied spatial analysis to address a variety of problems in biology, environmental science, public health and business. She uses neural networks for pattern classification, estimation and mixture modeling. Her current funded research includes development of a marine integrated decision analysis system (MIDAS) for Massachusetts, malaria risk mapping in Ethiopia, analysis of patent activities in China, and mapping health service delivery in Zambia. She is funded by the National Science Foundation on a GK-12 grant—Global Change Initiative—Research and Education (GLACIER) focusing on outreach to middle schools in the Boston area. In addition, she is funded by Rockefeller foundation on work related to data mining and visualization and the MacArthur Foundation on assessing the impact of climate change on food security and biodiversity in Cambodia.

Alexa Dayton
Sr. Program Manager, Community Training and Outreach, Gulf of Maine Research Institute

In Alexa Dayton's role as GMRIs Community Training and Outreach Program Manager, she focuses on the development of science education & professional training programs for the commercial fishing industries, as well as neutral convening and facilitation. Prior to GMRI, she worked for a wide range of organizations, including: Maine Huts & Trails, L.L. Bean, MapInfo Corporation, and she started up and operated her own profitable Route 1 retail business in Maine for many years. Alexa holds an MS in Biological Sciences from the University of Southern Maine, a BS in Electrical and Computer Engineering from the University of Michigan, and she is currently pursuing an interdisciplinary PhD at the University of Maine. She spends her free time boating, biking and hiking, and exploring the ocean, lakes, mountains, and rivers of Maine with her two boys. She volunteers her time to help get kids of all means outside through her work as a Board member with Winter Kids, and she dedicates many winter days each year as an Emergency first aid responder with the Sugarloaf/USA Ski Patrol.

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