Speaker Biographies

Paul Barber runs a lab at University of California, Los Angeles that seeks to integrate genetics, ecology, oceanography and geology to understand the processes that promote speciation in marine environments, creating marine biodiversity hotspots. For the past decade, he has focused on the fish and invertebrates of the coral reefs of the Coral Triangle, the global epicenter of marine biodiversity. Through a comparative approach, he examines the relative importance of tectonic history, physical oceanography, and organismal ecologies in limiting genetic connectivity and promoting evolution and lineage diversification. His recent work focuses on integrating empirical models of connectivity with predictions from geographically explicit models of contemporary and historical ocean currents. He works closely with conservation organizations such as Conservation International to translate our basic science into information that can help guide conservation planning, protecting these endangered reef ecosystems. He is also interested in the role of natural selection and adaptation in shaping population genetic patterns, particularly the role of the genetic basis of energetic performance of mitochondrial in size selective mortality of marine larvae.

Joey Bernhardt is an Assistant Professor at the University of Guelph. Her research aims to advance the fundamental understanding of the drivers of biodiversity change and the consequences of these changes for human well-being. Her research advances a solution to this research challenge by studying the processes that unite all of life on Earth – the metabolic processes by which living systems uptake, store and convert energy, matter and information from their environments to grow and persist. She combines theory, experiments and synthesis to study how living systems change as the environment changes, and what these changes mean for human well-being.

Tim Boyer is an oceanographer at NOAA's National Centers for Environmental information working in Silver Spring Maryland. Tim manages the World Ocean Database a program of the International Oceanographic Data Exchange for aggregating and publicly disseminating historic and recent ocean profile data for ocean and climate monitoring and study. Tim is also involved in utilizing the data for estimation of essential ocean and climate variables for a better understanding of the Earth's system.

Deborah Bronk joined Bigelow Laboratory for Ocean Sciences in February 2018 as its president and CEO. She earned a Ph.D. in marine-estuarine and environmental sciences from the University of Maryland, and she has more than three decades of experience as a professor and an oceanographer. During that time, she has conducted more than 50 research expeditions and field studies in freshwater and marine environments that stretch from pole to pole. Dr. Bronk also serves as president of The Oceanography Society and chairs the leadership Council of the University-National Oceanographic Laboratory System, which provides guidance on the US fleet

of ships, aircraft and deep submersibles. In 2020, she was recognized as a Fellow of the American Association for the Advancement of Science for her substantial research advances on the marine nitrogen cycle and for her leadership in the ocean science research community. Previously, Dr. Bronk was the Moses D. Nunnally Distinguished Professor of Marine Studies and department chair at Virginia Institute of Marine Science within the College of William & Mary. She also served as division director for the National Science Foundation's Division of Ocean Science and as president of the Association for the Sciences of Limnology and Oceanography.

Almesha L. Campbell, PhD., RTTP, is the Assistant Vice President for Research and Economic Development at Jackson State University (JSU). In this capacity, she supports the Vice President with overall responsibility for the Division of Research and Economic Development, which oversees the units of Grants and Contracts, Sponsored Programs, Research Compliance, Technology Transfer and Commercialization, Federal Relations, and the Center for Innovation, Entrepreneurship, and Economic Development.
She designs and manages programs around innovation, technology transfer, and commercialization to broaden the participation of underrepresented minorities in these areas. Dr. Campbell co-led the development of the JSU Center for Innovation and Entrepreneurship and created the JSU Innovation Fellows Program. She is the principal investigator or co-principal investigator for several federally funded programs at JSU including the National Science Foundation (NSF) Mid-South I-Corps Hub, the National Institutes of Health REACH Hub, the NSF Enabling SBE Science via the Network for Transformative Research program, the NSF Engines Development Award: Advancing Food Security and Climate Resilience (MS), and the recently awarded NSF ART program led by the University of Southern Mississippi.

She is the 2023 - 2024 Chair of the Board of Directors of AUTM. In addition to AUTM, she holds membership in professional organizations such as the Licensing Executives Society, Society of Research Administrators (SRA) International, and the American Society of Public Administration, and is an honorary member of the National Academy of Inventors (NAI).

Gabrielle Canonico is the manager of the US Integrated Ocean Observing System Marine Life program, the federal lead for the U.S. Marine Biodiversity Observation Network (MBON), and co-chair of the SOST Biodiversity Interagency Working Group. She works to ensure strong representation of biology in U.S. and global ocean observing efforts, and to find resources for sustained monitoring of marine life and biodiversity.

Gabrielle has spent over two decades working on a range of topics – including ocean observing, biodiversity, and aquatic resource management – with an emphasis on building partnerships to support science-based decision-making. She joined NOAA in 2007 after working for multiple other federal agencies, including the Department of Agriculture, U.S. Department of State, and U.S. Geological Survey.

Christine Yifeng Chen is a staff scientist at Lawrence Livermore National Laboratory, where she is developing radiochronometric dating tools for nuclear forensics investigations of interdicted nuclear materials. In 2022, Chen led a study showing systemic racial disparities in funding rates at the National Science Foundation. This work was covered in various outlets such as Science Magazine and The New York Times, and recognized by President Biden with an invitation to the White House for the CHIPS and Science Act signing ceremony. Chen holds a BA in geosciences from Princeton University and a PhD in geology from the Massachusetts Institute of Technology-Woods Hole Oceanographic Institution Joint Program.

J. Emmett Duffy is a marine biologist and Chief Scientist of the Smithsonian Institution's Marine Global Earth Observatory (MarineGEO) program, a network of partners around the world that use shared research tools to discover and understand how biodiversity contributes to health and resilience of changing coastal ecosystems. Duffy has been a leader for 20 years in research on marine biodiversity and ecology, and serves on the steering committee of the Global Ocean Observing System's Biology and Ecosystems panel, as co-lead of the developing U.S. National Ocean Biodiversity Strategy, and as a federal coordinating lead author on the National Nature Assessment. He is an Aldo Leopold Leadership Fellow, a Fellow of the Ecological Society of America, recipient of Japan's inaugural Kobe Prize in Marine Biology in 2011, and author of "Ocean Ecology. Marine life in the age of humans" (2021, Princeton University Press).

Sarah Davies is an Assistant Professor of Biology at Boston University and her lab studies how changing climates and ongoing anthropogenic habitat modifications threaten natural ecosystems worldwide. Climate change is creating unprecedented challenges for organisms worldwide and there is an urgent need to understand the processes underlying species persistence. Predicting persistence becomes more challenging when a species' fitness depends upon interactions between multiple partners. For corals, their fitness is tightly coupled with their symbiotic relationship with algae of the family Symbiodiniaceae, and this symbiosis is strongly influenced by increasing seawater temperatures. Research in her lab integrates eco-evolutionary experiments with genomic and environmental data to determine how corals and their symbionts interact with each other and their environments to determine symbiosis outcomes under rapid climate change. Her lab's research spans multiple levels of biological organization from genes to populations and integrates fieldwork with molecular and population genomic approaches to answer fundamental questions in ecology and evolution.

Rose Dufour is the program director of ship operations for the National Science Foundation (NSF), the cognizant agency for the U.S. Academic Research Fleet, and has been since 2011. She is responsible for making training cruise (among many other research cruises) possible.

Prior to working at the NSF she spent nearly 30 years at the University of California, San Diego, Scripps Institute of Oceanography, Ship Operations.

Corey Garza is the Associate Dean of Diversity and Inclusion in the College of the Environment and Professor in the School of Aquatic and Fishery Sciences at the University of Washington. He has held positions as a professor of marine science at California State University, Monterey Bay, and as a research ecologist with the National Oceanic and Atmospheric Administration (NOAA). His research focuses on the use of autonomous technologies to study spatial dynamics in coastal ecosystems. He also focuses on the development of programs to increase diversity in the ocean sciences. For the last 12 years, he has overseen National Science Foundation and NOAA programs focused on improving student diversity in ocean science and leadership training programs that aim to create inclusive training and work environments in science, technology, engineering, and medicine fields. Garza is a fellow of the California Academy of Sciences and sits on their board of trustees. He currently serves on the board of Directors for the American Geophysical Union and previously served on the board of directors for Society for the Advancement of Chicanos/Hispanics and Native Americans in Science. He received a B.S. in biology from California State University, Los Angeles and a Ph.D. in ecology, evolution and marine biology from the University of California, Santa Barbara.

Petere Gerstoft is distinguished Data Scientist, Scripps Institution of Oceanography and Adjunct Professor, Electrical and Computer Engineering, both at University of California, San Diego. He received the M.Sc. and the Ph.D. from the Technical University of Denmark, (in Structural Engineering) Lyngby, Denmark, in 1983 and 1986, respectively, and an M.Sc. from the

Western University, London, Canada, in 1984. From 1987-1992 he was at Ødegaard and Danneskiold-Samsøe, Copenhagen, Denmark, working on forward modeling and inversion for seismic exploration, and from 1989-1990 he was Visiting Scientist at Ocean Engineering Massachusetts Institute of Technology, Cambridge, and at Woods Hole Oceanographic Institute, Cape Cod. From 1992-1997 he was Senior Scientist at NATO CMRE La Spezia, Italy, where he developed the SAGA inversion code, which is used for ocean acoustic and electromagnetic signals. Since 1997 he has been with Scripps Institution of Oceanography, University of

California San Diego. His research interests are signal processing and machine leaning applied to acoustic and electromagnetic signals.

Peter Gerstoft is Fellow of IEEE, Fellow of Acoustical Society of America, and elected member of the International Union of Radio Science, Commission F.

Mary Glackin is the Chair of the Board of Atmospheric Sciences and Climate, NASEM and the past-President of the American Meteorological Society (AMS). From 2015-2019 she was the senior vice president (SVP) for science and forecast operations for The Weather Company, an IBM Business. Ms. Glackin had a long and distinguished career in public service, including 35 years at National Oceanic and Atmospheric Administration; the last five years she served as the Deputy UnderSecretary for Operations. During this time, Ms.

Glackin represented NOAA to the US Global Change Research Program and served as the inaugural co-chair of the Subcommittee for Integrated Marine Resource Management and as the federal representative to the Marine Protected Areas federal advisory group. Ms. Glackin is a Fellow of the AMS and the National Academy of Public Administration (NAPA).

Zachary Gold is the group lead for the PMEL Ocean Molecular Ecology program. His research leverages the power of genomics tools, particularly DNA metabarcoding, to conduct detailed assessments of marine community diversity, identifying, and unraveling the complex assembly and trophic interactions that drive ecosystem health. His research is focused on understanding how climate change (ocean acidification/hypoxia and warming oceans) are impacting the Pacific through innovative 'Omics applications as well as developing routine eDNA biomonitoring of key coastal and estuary species and habitats. Critically, his research directly informs conservation and resource management priorities, engages community scientists, and trains the next generation of diverse marine scientists.

Zack comes to PMEL from the Southern California Coastal Watershed Research Project and California Cooperative Fisheries Investigations (CalCOFI) where he lead the development and application of 'Omics methods, particularly environmental DNA (eDNA), for marine conservation efforts. Before this, he was a postdoctoral researcher at the University of Washington and the NOAA Northwest Fisheries Science Center working with Dr. Kim Parsons and Prof. Ryan Kelly using eDNA to better understand the trophic ecology and foraging behavior of endangered Cook Inlet Beluga Whales. He received his PhD from UCLA (2020) and B.S. in Marine Biology from Stanford University (2015).

Karen Grissom is an oceanographer with 23 years of experience in coastal and deep-water oceanography. She spent the early part of her career working for the National Ocean Service, where she facilitated the operationalization of emerging technology. Prior to this, Karen worked as a hydrogeologist for the State of Florida, assessing saltwater intrusion into freshwater aquifers.

After joining the NWS National Data Buoy Center in 2009 as the DART Operations Manager for the tsunami buoy program, Karen transitioned to the Mission Control Branch, where she served as Chief Data Manager of the TAO climate array before being selected for the position of NDBC Lead Scientist. In this role, she guided the organization on the value of marine observations and managed the modernization of NOAA’s premier in-situ ocean and climate array. Most recently, she completed a six-month detail as the Chief of NDBC Mission Control Branch. Karen serves on the WMO Advisory Group on Oceans and the Executive Board of WMO-IOC, Data Buoy Cooperation Panel. She is currently the Deputy Division Chief NOAA National Centers for Environmental Information Coasts, Oceans, and Geophysics Science Division. She is a graduate of the University of Washington with a B.S in Oceanography and has an M.S. in Marine Science from the University of Southern Mississippi.

From working to help modernize NOAA's National Water Level Observations Network to maintaining the quality and integrity of the data collected within observing systems, to collaborating with international partners to advocate for the environmental sustainability of observing systems and methods, Karen's years of experience underscore her belief that a sustained scientific endeavor should provide a tangible benefit to society.

Brandon Jones is the Program Director for Education and Broadening Participation in the Geosciences Directorate at the National Science Foundation (NSF). In this role, he is working to advance education and career preparation programs in the geosciences. Throughout his career, Jones has been a champion for increasing diversity and equity in science.

Before joining NSF, Jones served almost 13 years at the U.S. Environmental Protection Agency (EPA), where he was a program officer for ecological sciences and the team leader for EPA's student support programs including the Science To Achieve Results (STAR) Graduate Fellowship and the Greater Research Opportunities (GRO) Undergraduate Fellowship. He was also the EPA's Agency Representative to The White House's Office of Science, Technology and Policy's Federal Committee on STEM (FC-STEM).

Jones holds a bachelor's degree in Biology from The Lincoln University, a Historically Black College and University (HBCU) in Pennsylvania. He also holds both a master's degree and a doctorate in Marine Sciences from the University of Delaware's College of Earth, Ocean and Environment. He is a member of the National Association of Black Geoscientists (NABG), the Association for the Sciences of Limology and Oceanography (ASLO) and the Geological Society of America (GSA).

Henry Jones is the Director of Research Development and Scientific Entrepreneurship at The University of Southern Mississippi (USM). His primary research effort partners with industry to build a scalable data infrastructure for NOAA utilizing their shared experiences with similar challenges for the Department of Defense. As an entrepreneur and investor, Jones has an extensive background in helping create companies in Silicon Valley, Chicago, Mississippi, and Alabama, all with a common thread of data analysis. Using techniques developed in a Mississippi State University lab and the U.S. government's Landsat 7 satellite, Jones created his first company which developed cutting-edge online products for forestry, and was later MSU's first Director of its Center for Battlefield Innovation. Henry has a Masters and PhD from Stanford University, and a Bachelors from the University of Mississippi.
Before assuming his current role at USM, Jones served for six years as an adjunct professor at the University. He has served the past 16 years as an adjunct assistant professor of mechanical engineering at the University of Mississippi.

Steve Murawski is the Downtown Partnership/Peter Betzer Endowed Chair of Biological Oceanography at the University of South Florida's College of Marine Science. He is a fishery biologist and marine ecologist involved in understanding the impacts of human activities on the sustainability of ocean ecosystems. He has developed approaches for understanding the impacts

of fishing on marine fish complexes exploited in mixed-species aggregations. Additionally, his work on impacts of marine protected areas and other management options has formed the scientific basis for resource management regulation both nationally and globally. Such assessments can help inform management regulations to rebuild animal populations from the effects of overexploitation, oil spills and other chemical contaminants, loss of juvenile nursery areas, nutrient enrichment, climate change and other stressors.

Dr. Murawski currently serves as Director and Principal Investigator for the Center for Ocean Mapping and Innovative Technologies (COMIT), a cooperative agreement between the NOAA Office of Coast Survey and the University of South Florida to develop technologies to map undersea ocean and coastal regions. He was also Director of the Center for Integrated Analysis and Modeling of Gulf Ecosystems (C-IMAGE), which was funded by grants from the Gulf of Mexico Research Initiative to study effects of the 2010 Deepwater Horizon oil spill. His research interests are varied and center around the theme of acquiring actionable science that can influence public policy and help achieve sustainable marine ecosystems.

Dr. Murawski formerly served Chief Scientist of the National Marine Fisheries Service and has a long record of achievement in providing scientific information necessary for sustainable use of living marine resources. He is the recipient of the American Fisheries Society's Award of Excellence, the Department of Commerce Gold Medal, the Senior Executive Service Meritorious Rank Award, and is an elected Fellow of the American Association for the Advancement of Science, among many other awards.

Malin Pinsky, Associate Professor at the University of California Santa Cruz, is a biologist with expertise in the adaptation of ocean life to climate change, including ocean conservation. His more than 100 publications have appeared in Science, Nature, and other journals, and his research has been covered by the New York Times, Wall Street Journal, and BBC, among others. He is a Fellow of the American Association for the Advancement of Science, an Earth Leadership Fellow, and an Early Career Fellow of the Ecological Society of America. He was named one of Science News' ten scientists to watch in 2019. Pinsky serves on advisory boards for the Beijer Institute of the Royal Swedish Academy of Sciences, the non-profit Oceana, and the Chewonki Foundation. He has a Ph.D. in Biology from Stanford University and an A.B. in Biology and Environmental Studies from Williams College. He grew up exploring tidepools and mountains in Maine.

Doug Russell is the Executive Secretary at UNOLS. The UNOLS Office is headed by the Executive Secretary, The Executive Secretary acts under direction from the UNOLS Chair and Council. The Executive Secretary is responsible for all UNOLS Office functions and other UNOLS duties as directed by the UNOLS Chair and Council. The Executive Secretary is thoroughly familiar with the operation and scheduling of academic research vessels and with UNOLS and Federal policies related to research vessel and facility operations.

Kipp Shearman is interested in the study of physical processes at fronts in the ocean. Big, small, long, short, high-frequency, low-frequency, stratified, unstratified, rotating, nonrotating, forced, unforced, surface, bottom, middle, coastal, offshore – he doesn't care. If it's physics and coastal, he's interested. Dr. Shearman is most interested in understanding the dynamics of the evolving structure of ocean fronts. His approach is observational, using innovative sampling techniques – such as Autonomous Underwater Vehicles (AUVs) – coupled with modeling and analysis, to explain fundamental physical processes. In addition, he thinks that this kind of research needs to be approached with an interdisciplinary perspective, extending the understanding of physical processes to their impacts on biological, chemical and environmental processes.

Heidi Sosik is a senior scientist at the Woods Hole Oceanographic Institution where she has been on the faculty and staff since 1994. Sosik has been named a Fellow of The Oceanography Society and a Sustaining Fellow of the Association for the Sciences of Limnology and Oceanography, served as Chief Scientist of the Martha's Vineyard Coastal Observatory (MVCO) for more than 14 years, and is currently lead scientist for the Northeast U.S. Shelf Long Term Ecological Research (NES-LTER) program and the Ocean Twilight Zone (OTZ) Audacious Project. She is the co-creator of the Imaging FlowCytobot, an automated underwater microscope that has been used to study microscopic ocean life over time and space and to prevent shellfish poisoning. Her inventions and research in phytoplankton ecology have revolutionized the ability to track changes in phytoplankton community composition, including at the MVCO time series site, as part of the NES-LTER program and through research labs that utilize the Imaging FlowCytobot.

Robert Sparrock was commissioned through the US Naval Academy with BS in Oceanography, MS in Oceanography from UC San Diego, Scripps and Operations Research from Navy Post Graduate School.

As a nuclear-qualified surface warfare officer, he commanded USS Nicholas conducting counter piracy off Somalia, Oil Platform Defense in Iraqi and as Anti-Submarine Warfare Commander in UK Illustrious Carrier Battle Group. He holds subspecialties in National Security Strategy, Science & Technology and Acquisition Management.

His sea assignments include USS Virginia, USS Ticonderoga, USS Conolly, USS Theodore Roosevelt, USS Ronald Reagan and Executive Officer, USS Mount Whitney (LCC 20) with Joint Task Force: Horn of Africa embarked.

Ashore, Sparrock served as Operations Trainer at Joint Forces Command, Surface Warfare Module Branch Head at Tactical Training Group, Strategy and Policy Branch Head at Navy Irregular Warfare, Deputy Director Combat Logistics & Strategic Sealift, Military Advisor to Deputy Assistant Secretary of Defense for Tactical Warfare Systems, and Military Deputy to Ocean Battlespace Sensing Department, ONR.

Overseas, Sparrock served as Chief, Long Range Plans at Task Force Southern Watch in Saudi Arabia, Chief of Staff Naval Forces in South Korea, and in Afghanistan as observer/trainer.

Sparrock serves as Research Facilities Program Officer, responsible for six Navy-owned oceanographic research vessels; the historic deep-submersible vehicle Alvin, and meteorological research aircraft.

Robert R. Twilley has been a Professor in Department of Oceanography and Coastal Sciences, College of Coast and Environment, at LSU since 2004. He has served LSU in several administrative capacities including present position as Vice President of Research and Economic Development and formerly Executive Director of Louisiana Sea Grant College Program (2012 to 2021). He served as President of Coastal and Estuarine Research Federation in 2017-19 and was recipient of the LSU Rainmaker Award in 2021, National Wetlands Award in Science Research by the Environmental Law Institute in 2017, and the Cattail Award for research excellence by the International Wetland Biogeochemistry Association in 2021. His research spans some of the largest ecosystem restoration efforts in the world including the Mississippi River Delta, Chesapeake Bay, Florida Everglades and mangrove conservation and restoration throughout the neotropics of Ecuador, Colombia, Venezuela, and Mexico. Dr. Twilley has focused on integrating ecosystem models with engineering and community designs to improve performance of nature-based solutions, largely through his efforts as founder of the LSU Coastal Ecosystem Design Studio in 2009. He received his BS and MS from East Carolina University, PhD from University of Florida, and post-doctoral studies at University of Maryland Center for Environmental Studies.

Warren T. Wood is a research geophysicist and heads the Geology and Geophysics section at the U. S. Naval Research Laboratory (NRL) at Stennis Space Center, MS. He came to NRL in 1993 after earning a B.S. in physics from the University of Michigan and a PhD in Geophysics from the University of Texas at Austin. While at NRL his activities have been centered around using seismic and acoustic data to quantify seabed properties, specifically methane and methane hydrate emplacement and transport in the upper kilometer of the seafloor in all water depths. He has developed numerical simulations as well as conducting many multidisciplinary field efforts (seismic, acoustic, coring, heat flow) as chief scientist. He conducted some of the first field efforts in seismic oceanography directed toward quantification of ocean mixing. Since 2014 he has been using geospatial machine learning in the development of a comprehensive global predictive seabed model.