

## **IOOS Advisory Committee Member Bios**

### **Scott Rayder, University Corporation for Atmospheric Research, Chair**

Mr. Rayder currently resides in Boulder, Colorado as the Vice President and Senior Advisor to the President of the University Corporation for Atmospheric Research. He has experience with the Geospatial Systems division of ITT Defense and Information Systems, was the NOAA Chief of Staff from 2001-2008, Director of Government Relations at CORE, was on the U.S. House of Representatives Committee on Science. He has recently joined the Wilson Center's steering committee on Planning and Risk Management for Security-Related Disruptive Water and Weather Events, and was the Honorary Director of the IOOS Association from 2016-2017.

### **Thomas B. Curtin, Ph.D., University of Washington**

Mr. Curtin is currently a Senior Principal Research Scientist at the Applied Physics Laboratory/UW, a Senior Fellow at the Institute for Adaptive Systems and CEO of Agrowbot Farms. He has served as Chief Scientist at the NATO Undersea Research Centre in La Spezia Italy (2008-11) as Chief Knowledge Officer at the Association for Unmanned Vehicle Systems International (2007-08), as Program Manager at the US Office of Naval Research (ONR) (1984-2007), as Assistant Professor at North Carolina State University (1979-84), and as an oceanographer at the Fisheries Research Institute in Penang, Malaysia (1969-71). At ONR, he managed programs in Physical Oceanography, Arctic Sciences, Ocean Modeling and Prediction and Undersea Autonomous Operations.

### **Sara Graves, Ph.D., University of Alabama**

Dr. Graves is the current Director of University of Alabama's Information Technology and Systems Center, and has experience as the Director of the Information Technology Research Center of the National Space Science and Technology Center. She has served on numerous committees, including those for National Academy of Sciences, GCOOS, and NOAA, focusing on data science, open code policy, and geospatial technology, among others.

### **Jennifer Hagen, Quileute Indian Tribe**

Jennifer Hagen's experience includes more than 25 years of working with Washington Coastal Tribes in marine resource management topics. Since 2009, she has worked as a marine biologist for the Department of Natural Resources with the Quileute Tribe in La Push, Washington. She is actively engaged in federal, tribal, state and regional marine resource forums which address technical, policy and legal issues regarding the marine environment. Her experience includes extensive experience managing observing assets collecting biological variables, including conducting research and monitoring activities of off shore

and near shore marine resources. She participates on state and federal working groups in support of marine protected areas and local west coast resources management.

**Alfred Hanson, Ph.D., SubChem Sensor Systems, Inc.**

Dr. Hanson is the President and Founder of SubChem Sensor Systems, Inc. and has ties to the URI Graduate School of Oceanography in Narragansett Rhode Island. Dr. Hanson served on the Board of Directors for NERACOOS, as well as the NRFA. A marine organic geochemist, Dr. Hanson has had a career connection to the University of Rhode Island Graduate School of Oceanography. His primary focus has been the development of water quality equipment measuring contaminants in coastal waters, as well as chemical plume dynamics. He has interest in refining a real-time sensor and analysis system for communication of the data to coastal networks.

**Molly McCammon: Alaska Ocean Observing System (AOOS)**

Ms. McCammon is the current Executive Director of AOOS and a Trustee on the Consortium for Ocean Leadership, as well as the Lead PI in the long-term monitoring of the Exxon Valdez Oil Spill Trustee Council and a BOEM Marine Arctic Ecosystem Study. She has spent the last 25 years in Alaska, serving on various committees including the NAS Gulf Program Advisory Group and Polar Research Board, the Cook Inlet Regional Citizens' Advisory Council, Alaska Sea Grant, and NRCC to Establish an Arctic Observing Network. She has extensive experience in public policy in Alaska, working on natural resources, fisheries, and issues facing Alaskan Native communities with the then-governor Bill Sheffield, Alaska Fish and Game, and Chief of Staff for Senate Finance Committee.

**Ru Morrison, Ph.D. Northeastern Regional Association of Coastal Observing Systems (NERACOOS)**

Dr. Morrison is the Executive Director for NERACOOS, the northeast IOOS region, as well as the Chair of the Board at the US IOOS Association. He has experience with the Northeast Coastal Acidification Network (NECAN), the Data Management and Communications (DMAC) steering team, the US Interagency Observing Committee (IOOC), and the Integrated Sentinel Monitoring Network (ISMN). Dr. Morrison has worked with buoy and mooring systems, the latter of which specifically focused on profiling plankton through the water column.

**Ruth Perry Ph.D., Shell Exploration & Production Co.**

Dr. Perry has worked as a marine scientist and regulatory policy specialist for Shell, centered in Houston Texas. Her work focuses on stakeholder engagement in resource, policy, and environmental issues. Since coming to Shell in 2014 she has been on several projects, including a partnership with the University of Southern Mississippi that used gliders to improve forecasting. The projects are diverse, and also include the use of ROVs

and an ocean acidification study. Before her current job at Shell Dr. Perry was a research scientist at the Houston NOAA office working for GCOOS, where her responsibilities included stakeholder and public engagement after the Deepwater Horizon spill.

### **Jennifer Read, Ph.D., University of Michigan**

Dr. Read is the current Director of the Water Center housed at University of Michigan's Graham Sustainability Institute. Her focus lies in restoration programs within the Great Lakes, particularly within planning and feasibility studies and projects with diverse stakeholders. Dr. Read is on the Advisory Board for the Great Lakes Blue Accounting program and NOAA's Ecosystem Services Working Group, and has past experience as the Assistant Director and acting Director of Michigan Sea Grant.

### **Daniel Rudnick, Ph.D., University of California San Diego**

Dr. Rudnick is both a professor and Director of the Climate Ocean Atmosphere Program at Scripps Institution of Oceanography, focusing on air-sea interaction, ocean currents and circulation, and observation instrumentation. Dr. Rudnick has experience on over 25 research cruises, as well as committee experience with gliders. He has a role in both the steering committee for SCCOOS, and is participating in a Loop Current study in the Gulf of Mexico.

### **Oscar Schofield, Ph.D. , Rutgers University**

Dr. Schofield is the Chair for the Department of Marine and Coastal Sciences at Rutgers University, and has experience as the co-founder and co-Director of the Center of Ocean Observing Leadership. Dr. Schofield focuses include oceanic primary productivity and climate change, hydrological optics, and global geochemistry. He has extensive mentoring and teaching experience at the university level, and has participated in several educational podcasts and documentary films. He has helped coordinate the Gliderpalooza efforts that span the United States and Canada, and participated in numerous K-12 STEM outreach efforts.

### **Doug Vandemark, Ph.D., University of New Hampshire**

Dr. Vandemark currently serves the University of New Hampshire as Research Professor in Earth Sciences and Director of the Ocean Process Analysis Laboratory within the Institute for the Study of Earth. His research activities lie in the study of ocean and atmosphere boundary layer interactions and how to remotely measure near-surface ocean properties including wind, waves, salinity, and mass flux using satellite radar and radiometer systems. He is active in research using numerous NASA, NOAA, and ESA ocean observing satellite sensors and serves as a Principal Investigator on NASA's Ocean Surface Topography and Ocean Vector Wind Science Teams. He has been involved in coastal ocean observing activities in the Gulf of Maine since 2002, including work with ocean wave and carbon

dioxide measurements. He is a senior member of the IEEE, and serves or has served on NASA Physical Oceanography Data Archive advisory group, the strategic planning team for the Northeast Regional Association of Coastal and Ocean Observing Systems (NERACOOS), the Executive Committee for UNH/EOS, and research grant review panels for many agencies. Dr. Vandemark holds a B.Sc. in Physics from Hope College, an M.Sc. in Electrical Engineering from the University of Massachusetts, and a Doctorate in Oceanography from the University of New Hampshire.

### **Jyotika Virmani, Ph.D., XPRIZE**

Dr. Virmani is the Executive Director of Prize Operations and the Planet & Environment domain at XPRIZE as well as a producer at Runic Films. Dr. Virmani has prior ocean observing experience as the Associate Director of Florida Institute of Oceanography and the Executive Director of the FLCOOS Consortium. She is the lead author in several publications concerning innovative marine technology, has a significant media presence, and has served on the SECOORA Board of Directors.

### **Dick West, Independent Consultant**

Mr. West has worked as an independent consultant, working with several NOAA federal advisory committees on a variety of topics. He also served as the President and CEO of the Consortium for Oceanographic Research and Education (CORE) at the Consortium for Ocean Leadership (COL). Before that, Mr. West had a career of almost 40 years in the Navy as an oceanographer, Deputy Director for several missile defense systems, and an instructor.

### **Bob Winokur, Independent Consultant**

Mr. Winokur retired from federal service in 2013 after 52 years in various ocean and marine centered positions, and is currently a consultant for ocean and satellite-based remote sensing programs and management projects, including NESDIS and the Independent Review team that assesses NOAA's oceanographic ship fleet. Mr. Winokur has experience in several high-level positions at Naval Operations, the National Weather Service, and the Navy. He also currently sits on several committees, including the NASA Joint Polar Satellite System Standing Review Board, NOAA's Science Advisory Board (SAB), and the National Academies Ocean Studies Board.

## IOOS Advisory Committee Federal Staff

### **Krisa Arzayus, Deputy Director of the U.S. IOOS Office, and DFO of the IOOS AC**

Krisa Arzayus is the Deputy Director for the U.S. IOOS Office, and oversees office operations including budget execution and staffing, while also working on strategic planning and implementation in coordination with Regional and National partners. She also serves as the Designated Federal Official for the U.S. IOOS Federal Advisory Committee, providing oversight and management of the FAC.

Krisa holds a Ph.D. in Marine Science from the College of William & Mary and a B.S. in Chemistry with a minor in Music from Moravian College. Prior to joining IOOS, she served as acting deputy director for the Center for Coasts, Oceans, and Geophysics in the National Centers for Environmental Information. Krisa has also worked for NOAA's Climate Program Office as the Deputy Climate Goal lead and division chief for the Planning and Programming Division. She first came to NOAA as a Knauss Sea Grant Fellow in 2001-2002. Krisa joined NOAA as a federal employee in 2003, working for the Office of Oceanic and Atmospheric Research headquarters as the Climate Lead in what was then the Office of Scientific Support.

### **Becca Derex, Alternate DFO of the IOOS AC**

Becca Derex is the Alternate Designated Federal Official on the IOOS Advisory Committee. In addition, she is the Legislative Affairs Lead, Strategic Planning Lead, and Budget Formulation Lead for the U.S. IOOS Office. She also coordinates the National Ocean Service Unmanned Systems (UxS) Cross-Program Team, and participates on the NOAA Unmanned Systems Executive Oversight Board. Before coming to IOOS, Becca was a Special Assistant in the NOS Office of the Assistant Administrator, and completed a Sea Grant Fellowship working as a Policy Analyst in the NOS Policy and Constituent Affairs Division. In these roles, she analyzed coastal and marine policy issues, provided management and program support services, and developed mission-advancing recommendations regarding legislation, internal operations and processes, and strategic planning initiatives to Senior Executive Leadership at NOS and at NOAA. Becca has a Masters in Marine Biology from the College of Charleston.

### **Marnie Brown, Executive Secretariat of the IOOS AC**

Marnie Brown is the Executive Secretariat of the IOOS Advisory Committee, and provides staff support to the U.S. IOOS Office. Prior to coming to IOOS, Marnie worked at the headquarters office for NOAA's National Environmental Satellite, Data, and Information Services. Relatively new to the Federal Government, Marnie has a background in communications, event management, administrative support, and community outreach in the government relations and not-for-profit sectors. Marnie is a native Texan and a graduate of the University of Texas at Austin.