2023 Global Ocean Science Education (GOSE) Workshop

May 23-25

Graduate School of Oceanography University of Rhode Island

AGENDA

The 2023 GOSE Workshop Goals are to:

- 1. Bring together the ocean science, education, policy, and business/industry sectors
- 2. Increase knowledge and awareness of the importance of ocean acoustics/underwater sound to society;
- 3. Share information about the current state of knowledge and innovative technologies
- 4. Identify educational strategies and industry needs to train the next generation and educate the public and support workforce development across sectors;
- 5. Integrate ocean acoustics into education resources for enhanced global societal ocean literacy and decision making
- 6. Identify strategies and activities to support the Maritime Acoustic Environment Program of the United Nations Decade of Ocean Science for Sustainable Development

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TUESDAY, Ma	y 23, 2023
9:00	Welcome and Introductions and Workshop Goals Speakers: Gail Scowcroft, University of Rhode Island, and Peter Tuddenham, College of Exploration
9:30	Plenary I: Forefront of Ocean Acoustics Research Speaker: James Lynch, Woods Hole Oceanographic Institution
9:50	Panel I: Importance of Ocean Acoustics for Society Moderator: Christopher Knowlton, University of Rhode Island Speakers: Steven Hall, Freelance Ocean Consultancy Greg DeCelles, Orsted Kathleen Vigness Raposa, Inspire Environmental Susan Balcirak, Naval Undersea Warfare Center
10:35	Break
10:55	Plenary II: Marine Mammal Sound Production and Reception Speaker: Darlene Ketten, Brown University and Woods Hole Oceanographic Institution
11:30	Plenary III: Marine Fish Sound Production and Reception Speaker: Clara Amorim, University of Lisbon
11:50	Plenary IV: Marine Invertebrate Sound Production and Reception Speaker: Louise Roberts, University of Liverpool
12:10	Lunch
13:10	Breakout Group I: Integrating Ocean Acoustics into Ocean Education/Ocean Literacy Initiatives Example Discussion Topics:

Example Discussion Topics:

A. Using acoustic research and data in programs for museum and aquarium audiences during the Ocean Decade, including existing programs and currently available ocean acoustics resources and materials

B. Using ocean acoustics research and data in K-12 science, including existing programs and currently available ocean acoustics resources and materials

C. Using ocean acoustics research and data in undergraduate education, including existing programs and currently available ocean acoustics resources and materials

	D. Using the media and social media to highlight ocean acoustics initiatives
14:00	Breakout Group I Reports
14:20	Panel II: Skills Needed by the Ocean Acoustics Workforce Moderator: Kathleen Vigness Raposa, Inspire Environmental Speakers: Meme Lobecker, Konsberg Siobhan Niklasson, Los Alamos National Laboratory Helen Stewart, Fugro Lora Van Uffelen, University of Rhode Island
15:10	Break
15:40	Plenary V: Introduction to Microcredentials Speaker: Liesl Hotaling, Eidos Education and Marine Technology Society
15:55	Breakout Group II: A Framework for an Ocean Acoustics Microcredentials Program A. What careers would benefit from a microcredentials program in ocean acoustics? B. What topics/content should be included for specific microcredentials? C. What competencies are employers seeking in the ocean acoustics workforce (such as using technologies) D. Who could provide these programs, where could they be held, and how do people find out about them?
16:30	Breakout Group II Reports
16:50	Lightning Round I: Student Presentations Moderator: Holly Morin, University of Rhode Island Speakers: Hailey Davies, University of Victoria Lauren Fritz, University of California Santa Cruz Mark Goldwater, Woods Hole Oceanographic Institution Tiffany Raetzelt, University of South Florida Ashley Taylor Cook, University of Miami
17:30	Adjourn
WEDNESI 9:00	DAY, May 24, 2023 Welcome and Reflection
9:15	Plenary VI: Impacts and Mitigation Strategies Speaker: Ben Colbert, U.S. Navy Marine Living Resources Division
9:35	Plenary VII: International Regulations Related to Anthropogenic Sound Speaker: Klaus Lucke, JASCO (virtual)
10:15	Break
10:40	Panel III: Strategies for Integrating Research, Education, Business and Policy Moderator: Christopher Knowlton, University of Rhode Island Speakers: Shane Guan, Bureau of Ocean Energy Management Holly Morin, University of Rhode Island

Maggie Merrill, Blue Venture Forum

Kim Gavin, BLUEiQ

11:20	Breakout Group III: Actions Needed to Develop and Implement an Ocean Acoustics Microcredentials Program Example Discussion Topics: A. Who is/are the audience/audiences for a microcredentials program? B. Who needs to be included in the development of a microcredentials program? C. What should be the essential content ingredients of a microcredentials program? D. Where and how should a microcredentials program be offered? E. How can a microcredentials unit fit into existing academic programs?	
12:10	Breakout Group III Reports	
12:30	Lunch	
13:30	Plenary VIII: The Ocean Decade's Maritime Acoustic Environment Program Speaker: Kyle Becker, Office of Naval Research	
14:00	Panel IV: Passive Acoustics Applications Moderator: Liesl Hotaling Speakers: Jeff Kneebone, New England Aquarium Sofie Van Parijs, National Oceanic and Atmospheric Administration Rob McGurrin, BLUEiQ	
14:40	Break	
15:10	Lightning Round II: Early Career and Student Presentations Moderator: Gail Scowcroft, University of Rhode Island Speakers: Danielle Goudreau, Collins Engineering Ian Jones, University of New Hampshire Grant Milne, University of New Hampshire Kelsey Rudes, National Oceanic and Atmospheric Administration Luis Pomales Velazquez, University of Rhode Island	
15:45	Breakout Group IV: Developing Cross-Sector Partnerships Example Discussion Topics: A. What needs might be met with cross-sector partnerships? B. What might be some goals for cross-sector partnerships? C. Have you found challenges to cross-sector partnerships, and if so, have you found any solutions? D. What forum could be used to foster cross-sector partnerships?	
16:30	Breakout Group IV Report Out	
16:50	Plenary IX: Introduction to Open Space Session Speaker: Peter Tuddenham, College of Exploration	
17:15	Adjourn	
THURSDAY, May 25, 2023 9:00 Welcome and Review		
9:15 (Examples: one gactivities for the	Open Space Session – Furthering the Goals of the Global Ocean Science Community group could focus on the certificate program for business and industry, another could focus on Decade)	
10:15	Break	

Open Space Continues

10:45

11:15	Open Space Group Reports
11:45	Plenary X: Moving the Field Forward – Artificial Intelligence and Machine Learning on the Horizon Speaker: TBD
12:10	Large Group Discussion – Reflection on 2023 GOSE Workshop and Ideas for the Future
12:30	Lunch