

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

TUESDAY, May 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:
 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**

WEDNESDAY, May 24, 2023

9:00 **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

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 McGurrian, 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 **Open Space Session – Furthering the Goals of the Global Ocean Science Community**
(Examples: one group could focus on the certificate program for business and industry, another could focus on activities for the Decade)

10:15 **Break**

10:45 **Open Space Continues**

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