# Low-Cost Ocean Instrumentation Workshop

**Woods Hole Oceanographic Institution**

October 19–22, 2026

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| **Location** | WHOI DeepTech Facility, Woods Hole, Massachusetts |
| **Hands-on Sessions** | October 23 and October 26–28 (optional) |
| **Supported by** | Schmidt Sciences and the U.S. Office of Naval Research |

## Workshop Objectives

Affordable, scalable ocean observing systems have the potential to substantially expand observations of the coastal and open ocean by enabling measurements at spatial and temporal scales that are difficult to achieve using traditional research-grade instrumentation. This workshop brings together researchers, engineers, and technologists to exchange technical knowledge, demonstrate emerging technologies, discuss common engineering challenges, and develop collaborations that advance reliable, low-cost ocean observing systems.

**Specific objectives:**

- Review recent advances in low-cost oceanographic and marine environmental instrumentation.
- Identify scientific and operational observing needs that can be addressed by affordable sensor technologies.
- Share best practices in sensor design, fabrication, calibration, deployment, and long-term operation.
- Foster collaborations among universities, government laboratories, industry, and nonprofit organizations.
- Develop recommendations and priorities for future technology development and collaborative projects.

| Day | Time | Activity |
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| Monday, Oct. 19 | 08:00–09:00 | Registration and breakfast |
| | 09:00–09:20 | Welcome and workshop objectives |
| | 09:20–10:00 | Keynote |
| | 10:30–12:00 | Session 1: Emerging opportunities in low-cost sensing |
| | 13:00–14:30 | Session 2: Physical oceanography and meteorology sensors |
| | 15:00–16:30 | Lightning talks |
| | 16:30–17:30 | Open discussion |
| Tuesday, Oct. 20 | 09:00–10:30 | Session 3: Environmental sensors |
| | 13:30–15:00 | Panel: Robust low-cost marine systems |
| | 15:30–17:00 | Demonstrations and posters |
| Wednesday, Oct. 21 | 09:00–10:30 | Mechanical design and marine hardening |
| | 11:00–12:30 | Manufacturing, calibration, and QA |
| | 13:30–15:00 | DeepTech demonstrations and facility tours |
| | 15:30–17:00 | Breakout discussions |
| Thursday, Oct. 22 | 09:00–10:30 | Breakout reports |
| | 11:00–12:00 | Collaborative opportunities |
| | 13:00–14:30 | Workshop roadmap |
| | 15:00–16:30 | Closing session |
| Oct. 23, 26–28 | | Optional hands-on development sessions |