## NDSF DEIJ Update

## Micki Barboni & Anna Michel



Focus on Inspiring, Developing, Recruiting, and Retaining a Diverse Pipeline

Overarching approach:

Share widely that career paths in deep submergence and operations are open to all.

- □ K-12 outreach
  - Live streams with groups like "Exploring by the Seat of Your Pants"
- Undergraduates at NDSF and WHOI Deep Submergence
  - Example success story: Summer 2021, female ocean engineering research student at DSL is returning in 2022 to sail with ROV Jason
- Diversity in vehicles groups (MATE interns, increased diversity in engineers/operators for 2022 cruises)
  - Previous success with Alvin!

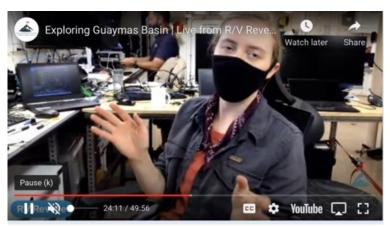






Live Streams from Ships: Expanded bandwidth enables greater inclusion Increases the capacity to reach classrooms, scientists, and engineers on shore

- □ Fall 2021 Live streams from RR2107 (ndsf.whoi.edu)
  - Exploring by the seat of your pants
    - Focus on technology-based careers
    - Reached general public and live links to classrooms in USA & Canada
    - Sentry & Jason team members
    - Live stream from seafloor
  - Live stream hosted on shore at WHOI
    - Focus on marine operations careers (video of interviews of shipboard careers)
- □ Capability to stream ROV Jason video and <u>now AUV Sentry data</u> live to shore → enabling greater inclusion



Amanda Sutherland from the Sentry Team discussing the operation of Sentry and how she became a Roboticist with WHOI during the RR2107 cruise.



Melinda Bahruth, PhD student from the University of Delaware and Stefano Suman from the Sentry team work in real-time with co-PI Chris German during the 4CAST GOFAR project.







## Internships

- □ Internships
  - 4 MATE Internships between Jason and Sentry for summer of 2022
    - Interviews are almost complete
  - Partnering with Tuskegee University through OECI
    - Encouraging a diverse team of students to come to WHOI
- Establishing a relationship with the University of Southern Mississippi
  - Plan to provide internship opportunities to Ocean Engineering students in 2023



Challenges	Approaches to Success
<ul> <li>Housing at WHOI is a huge challenge, especially in the summer</li> <li>Housing "crisis" on Cape Cod currently</li> </ul>	<ul> <li>Limits our ability to bring interns to WHOI</li> <li>Looking at alternative housing options</li> <li>Bringing interns to sea</li> </ul>
<ul> <li>Mentor availability / Berthing availability</li> </ul>	<ul> <li>Working with ship schedules to identify cruises that can include interns</li> </ul>
<ul> <li>Mentorship training and inclusive practices</li> </ul>	<ul> <li>Scheduling appropriate training for mentorship and inclusion</li> <li>Utilizing a cohort model when possible</li> <li>WHOI climate study is on-going</li> </ul>
<ul> <li>COVID-19 Impacts</li> </ul>	<ul> <li>Hopeful for 2022 to be smoother</li> <li>2023 may be able to include more interns as hopefully restrictions decrease</li> </ul>

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NDSF BEEF SUBMERGENCE

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Pipeline activities

- □ DeSSC new user program Day 2 Activities (May 2022)
- □ Presentations at conferences (e.g., SWE, SACNAS)
- Development of a collaborative marine technology workshop with local community colleges
  - NDSF, Ship Ops, SSSG, OOI
- Outreach events to K-12 utilizing small ROVs
  - e.g., Girls in Science Camp @ Penikese Island (summer 2022)
- □ Presentation to WHOI Ocean Science Journalism Fellowship program





