

EXECUTIVE SUMMARY

The ARCUS *Build an ROV* workshop was a collaborative, hands-on event that brought together teachers, teacher/mentors, scientists and researchers for three days, July 30-31 and August 1, 2013. The workshop was held at the Monterey Bay Aquarium Research Institute (MBARI) in Monterey, California.

This report presents results of an evaluation of the ARCUS *Build an ROV* workshop. Data was collected in two ways, through online daily feedback surveys and through in-depth interviews conducted by an outside evaluator. Both methods captured the same results, with participants highly satisfied with what they had learned from the workshop, the hands-on activities that had been planned, the presentations and opportunities to share ideas and network with experts in the field and with fellow teachers. All participants have plans to take what they learned back to their schools and implement an ROV project with their students. Projects include building, testing, and collecting data using ROVs. While some teachers came to the workshop with some ROV experience, others did not. For all participants, the workshop provided the training, support, and encouragement from researchers and PolarTREC teachers that ensured a positive experience for teachers of all levels.

Results from the in-depth interviews conducted with participants after the workshop indicated a high degree of satisfaction with the presentations, polar science topics and research presentations, collaboration, and hands-on activities involved with building the ROV and adapting the design to accomplish specific tasks. Participants also expressed appreciation for the lab tours that included a visit to SCINI (Submersible Capable of under Ice Navigation and Imaging), a small, slender vehicle that can fit through a 20 cm hole in the ice, allowing for deployment without heavy drilling equipment and with minimal logistical support¹, boarding the Rachel Carson ship and seeing the ROV aboard, and praised the MBARI facilities as a near perfect setting for holding the workshop.

The overall goals of the workshop were to provide underwater ROV training to teachers, build and test a ROV, and prepare teachers to implement classroom projects around the topics of ROVs and marine polar science. By the end of the workshop, all participants noted they gained the knowledge and confidence to teach students about polar research currently being conducted and to implement ROV projects with their students. Participants cited the collaborative nature of the workshop as a particular strength and strongly praised the presenters and mentor teachers who helped make the workshop a success.

"I learned so much! I learned more about how ROVs are being used by researchers throughout the world, how to more authentically incorporate the use of ROVs into my classroom, and how to connect the work with Polar Science."

¹ Cazenave, et.al, 2011. Development of the ROV SCINI and Deployment in McMurdo Sound, Antarctica. The Journal of Ocean Technology, Sustainable Oceans, Vol 6, No. 3.