

Antarctic Subsea Cable Workshop: High-Speed Connectivity Needs to Advance US Antarctic Science.



June 29 - July 1, 2021 Virtual Zoom Workshop, 1-5 pm US CDT (6-10 pm UTC)

Attendance capped at ~50 active participants

YouTube live stream with chat open to all (Days 1 and 3), archived for asynchronous viewing

More information will be posted to the [workshop website](#) as it is available.

This National Science Foundation (NSF) funded workshop will produce a report outlining the science advances and other impacts that would be enabled by massive improvements in digital connectivity to Antarctica. Given recent synergistic opportunities, NSF is interested in a visioning exercise to understand the transformational potential of a submarine fiber optic telecommunications cable between New Zealand and McMurdo Station in the type, kind and conduct of research supported by the United States Antarctic Program. Terabit-scale networking capability could eliminate current bandwidth constraints faced by researchers, educators and support functions while also reducing the latency of current satellite-based communication. The cable infrastructure can itself also serve as a scientific platform (a “SMART” cable) with capability to monitor ocean conditions and seismic activity. Direct fiber connectivity to McMurdo may also enable improved connectivity to Amundsen-Scott South Pole Station and science infrastructure there.

The three day workshop will include a day of short presentations spanning the breadth of Antarctic science supported by NSF, existing need and opportunities for improved networking

capabilities, and how science and operations in Antarctica would benefit from dramatically increased connectivity.

Day 1: Scene Setting, Lightning Talks

Day 2: Workshop Breakout Sessions

Day 3: Summary and Plan for Drafting Report

If you are interested in participating in the workshop, we would appreciate your initial response to [this survey](#) to help gauge interest and determine how a new, instrumented fiber optic cable to Antarctica would advance science. We welcome participation from US and international research scientists, US Antarctic support providers, education and outreach experts, and submarine cable and digital networking experts.

Thank you for your interest, and if you have suggestions for additional members of the research, education, digital networking and science support community who could contribute we would appreciate your help in providing us their contact information at the end of the survey.

Initial Organizing Committee Members

Peter Neff, Assistant Research Professor, University of Minnesota

Gwen Jacobs, Director of Cyberinfrastructure, University of Hawaii

David Lassner, President, University of Hawaii

Jonathan Pundsack, Managing Director, Polar Geospatial Center, University of Minnesota

Heidi Roop, Assistant Professor, University of Minnesota

Garret Yoshimi, Vice President for IT and Chief Information Officer, University of Hawaii

Bruce Howe, Chair, [Joint Task Force \(JTF\), ITU/WMO/IOC SMART Cables for Observing the Ocean](#)

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Questions and correspondence should be directed to project PI Peter Neff, pneff@umn.edu.