

# environmental monitoring

## FAU, NASA to Monitor Algae in Lake Okeechobee

A massive, toxic algae bloom occurred in Lake Okeechobee in 2016 in the St. Lucie Estuary. Scientists with Florida Atlantic University's (FAU) Harbor Branch Oceanographic Institute (HBOI) are partnering with NASA to learn more about algae levels in the lake through the deployment of a SeaPRISM, one of NASA's water quality monitoring instruments.

SeaPRISMs are above-water radiometers that look at the color of water and use algorithms to determine chlorophyll, turbidity and cyanobacteria levels.

The device will take hourly readings and send the information via cell signal to NASA, which will validate and publish the data online.

## Ecosystems, Food Webs Study

On January 9, 2018, a Teledyne Webb Slocum Glider with an inte-

grated ASL acoustic zooplankton fish profiler (AZFP) with three frequencies (38, 125 and 200 kHz) was deployed for three weeks in the Terra Nova Bay (Ross Sea, Antarctica) to obtain mesoscale and submesoscale measurements of oceanographic processes and simultaneous biological distributions and abundance.

From the data, the researchers will examine the interactions between multiple trophic levels (phytoplankton, zooplankton and fish) and their relationships to the physical hydrographic driving forces such as sea ice and currents.

The AZFP can differentiate key species, such as copepods, crystal krill and Antarctic silverfish. The glider was also instrumented with a CTD, a WET Labs BB2FL ECO puck to measure phytoplankton biomass and an Aandera Optode dissolved oxygen sensor. The hydrographic data are available through RU-

COOL (Rutgers University Center for Ocean Observing Leadership) and THREDDS (Thematic Real-time Environmental Data Distribution Services). This project will pave the way for cost-effective, automated examination of food webs and ecosystems in regions all over the global ocean, serving a wide range of users.

## Tracking Temp, pH Changes In Gulf of Maine

The Gulf of Maine is a productive, complex and semi-enclosed "sea within a sea." Changes in temperature and pH threaten many of the Gulf's resources. Schoodic Institute and the U.S. National Park Service are working together to understand these changes and their impacts in Acadia National Park. They have deployed a Sea-Bird SeapHOx pH sensor to collect continuous data just off one of the park's islands, near one of the major currents in the Gulf of Maine.

The SeapHOx provides data to help investigate changes in biodi-



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### PROGRAM CHAIRS



**Thomas Brostrøm**  
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**Stephanie McClellan**  
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### KEYNOTE SPEAKER



**The Honorable Terje Søviknes**  
Minister of Petroleum and Energy, Norway



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