



SPRING 2017 SEMINAR SERIES

DEPARTMENT OF OCEAN, EARTH, AND ATMOSPHERIC SCIENCES
3:00PM – ROOM 200 IN THE OCEANOGRAPHY/PHYSICS BUILDING
THURSDAY March 23rd, 2017

“Applications of Water Quality Satellite Remote Sensing.”

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ABSTRACT

Cyanobacterial blooms occur worldwide and are associated with ecological stress, taste and odor of potable water, and illness. The Cyanobacteria Assessment Network (CyAN) integrates the research of the US EPA, NASA, NOAA, and USGS to provide a monitoring approach for existing ocean color and land imaging satellite capabilities to support U.S. fresh and brackish water quality management decisions. Examples of applications are explored to support the environmental management and public use of U.S. lakes, reservoirs, and estuaries by providing the capability to detect and quantify cyanobacterial abundance, chlorophyll-a, turbidity, and temperature using satellite data records. The project develops a uniform and systematic approach for identifying cyanobacteria blooms using ocean color and land imaging satellites across the United States; creates a strategy for evaluation and refinement of algorithms across satellite platforms; identifies landscape linkages of chlorophyll-a and cyanobacteria blooms in freshwater systems; characterizes exposure and human health effects in drinking water sources and recreational waters; characterizes economic value of the early warning system; and disseminates satellite data through decision support tools such as an Android mobile application and EnviroAtlas GIS web portal.

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