WEBINAR

Tuesday
June 23, 2020
12:00 PM - 1:00 PM ET

Coastal 3-D high-resolution maps for floods, wetlands, and biodiversity

Very high-resolution (i.e. < 5-meter pixel) satellite imagery has proven effective to map upland, wetland, and benthic ecosystems, but challenges in data acquisition and storage, algorithm training, and image processing have prevented efficient, large-scale and time-series mapping of these data until recently. Here I will describe the Spectral and Object-based Automated Land-cover Classification of High-resolution Imagery protocol that we developed and applied to 20,000 WorldView images run on supercomputers to map land cover across the entire US Gulf of Mexico coastline. The method is fully automated and completed the mapping 200 times faster than existing methods. Multiple products, including wetland maps and bathymetry, are output and mosaicked for end-user applications.

Presenter

Dr. Matt McCarthy is a Research Scientist at Oak Ridge National Laboratory, home of the world's fastest supercomputer, and earned his PhD working in remote sensing of coastal environments at the University of South Florida. He grew up in Gainesville, Florida fishing and boating on both Atlantic and Gulf coasts, and now conducts research using advanced satellite image data to map and monitor those coasts for changes caused by a variety of drivers.

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