

Proposed Advisor: Dr. Robert Fusina

Lab Location: NRL (Washington DC)

Research Description: Research is being conducted to improve existing and develop new techniques for multisensor remote characterization of sediment properties, including composition, consistency, and mechanical characteristics of sediments of all types. These sediments consist of sandy and gravely beds, soft cohesive coastal and inland deposits, tidal flats, and other types of terrain. A combination of high-altitude and surface proximity remote measurements techniques (i.e., hyperspectral, synthetic aperture radar, thermal, and LIDAR sensors) along with detailed geotechnical and geological investigation of the properties of the terrain is used for model development and validation. The goal is to improve our ability to describe not only generic terrain features and composition but also derive material properties that can be used in predicting soil behavior under mechanical loads, including the description of trafficability. Work is also being conducted on radiative transfer theory to enable a priori determination of sediment properties.

Contact Information:

Shannon Koonce
1818 N St. NW
Suite 600
Washington DC 20036
postdocs@asee.org