ERSC - Environmental Monitoring

Environmental Remote Sensing Center — Gaylord Nelson Institute for Environmental Studies

Research MS/PhD Option

Academic training for research and teaching

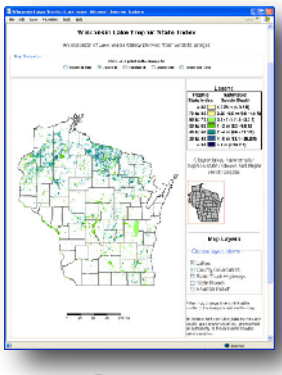
The Research **Masters Degree** provides a rigorous scientific program for students interested in the development, design and application of remote sensing, GIS, GPS, web-serving spatial information, and supporting geospatial technologies in a research setting.

Preparation of an innovative and significant thesis is a requirement of this option. Typically, students who are successful in this program develop new algorithms, techniques and tools, and then go on to a PhD program or to a career that capitalizes on their research abilities.

The **Doctoral Degree** in Environmental Monitoring (EM) prepares students to become professors or scientists working on the cutting edge of research in remote sensing or another focus area within geospatial information science.

Alumni of the PhD program typically work as university faculty, government scientists or carry out research in the private sector developing, designing and testing new remote sensing tools and techniques. Admission into the EM doctoral program is highly competitive. All applicants must have an outstanding MS research thesis and identify a UW-Madison faculty member(s) whose research interests parallel their own.

Summer intern Melvin Mattocks collects field spectra with a spectroradiometer.



ERSC develops custom internet mapping applications such as this interactive lake water clarity map (left).

Shruti Mukhtyar and Paul Pope collect GPS data at a field station.

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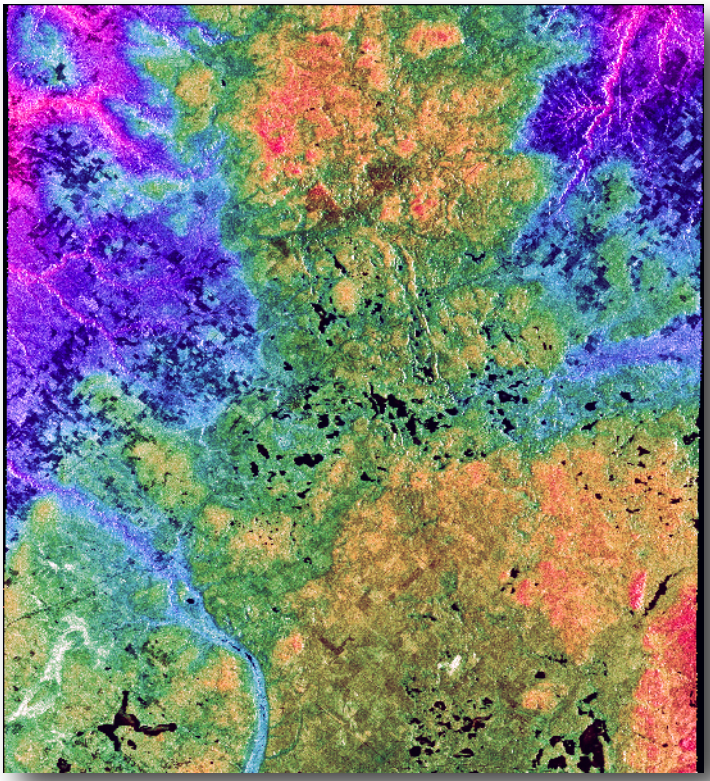
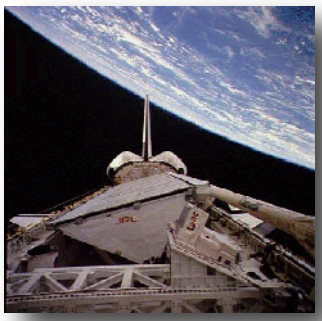
for more information visit http://www.ersc.wisc.edu

Research Masters student Matthew Bobo conducts a land cover field survey in Douglas County, Wisconsin.



A digital elevation model (colors indicate elevation) for a region in northwestern Wisconsin. The DEM was created using interferometric analysis of long-wavelength synthetic aperture radar imagery. The valley of the Brule River can be seen in the lower part of this image; the Brule flows through a deep "spillway" carved by glacial melt-water at the end of the last Ice Age.



The SIR-C/X-SAR radar system, flown on the space shuttle Endeavor in 1994. Environmental Monitoring graduate students used data from this system for MS and PhD research on forest ecosystems and topographic mapping (see map above).