**MS Graduate Assistantship: Forest Ecosystems Remote Sensing***

The Forest Remote Sensing Lab at Iowa State University seeks a motivated M.S. student interested in forest ecology, satellite remote sensing, GIS modeling, and computer programming. This graduate assistantship involves working with forest mensuration data collected in the Superior National Forest of northern Minnesota to generate spatially explicit estimates of critical forest biophysical parameters needed to track forest fuels and model forest fire behavior (LANDFIRE). The goal is to use spatially continuous estimates of forest structure to explore adaptive strategies for fire risk mitigation and management, and to improve modeling of ecosystem response to environmental change. The student will initially spend 50% of their time writing code to reconfiguring field plot data into canopy biomass (in layers) based on tree crown dimensions and shapes, allometric crown biomass, and measured canopy gap fraction. Resulting canopy biomass estimates will then be scaled up to the landscape level using concurrent, multispectral satellite sensor data.

For this position, we are in search of a student with strong math and programming skills, with interest and background in boreal or sub-boreal forest ecology, GIS and satellite remote sensing technologies. The student will use satellite image data (Landsat, SPOT, etc.), image processing software (Erdas Imagine, ENVI), GIS analyses, and statistical modeling (Matlab, SAS, R, Python) to explore and exploit relationships between forest biophysical parameters and satellite-detected forest reflectance. The student will matriculate in the Natural Resource Ecology and Management Department at Iowa State University, where formal classwork will commence in spring of 2016.

The assistantship is available immediately, however the student must be matriculated as soon as possible to be considered for the spring 2016 term. The position is a standard 50% time assistantship with a stipend ($21,600/year), 50% tuition remission, and access to excellent health care benefits.

**Qualifications:**
Solid math and statistics skills with a working knowledge of satellite remote sensing and GIS. Strong programming or scripting experience (e.g., Matlab, R, or Python) is **required**. Good English writing and verbal communication skills, binocular vision, as well as the ability to work with a team, are essential. Applicant must possess a valid driver’s license.

**Application Process:**
To apply for this position, send the following information in electronic form to ptwolter@iastate.edu: cover letter, curriculum vitae, names and contact information for three references, and unofficial copies of transcripts. Review of applications has begun and will continue until the position has been filled.

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