

US Forest Service Research Participation Program  
U.S. Department of Agriculture  
Athens, GA

FS-2014-RD-200

Project Description:

A postdoctoral research participation project is available with the Southern Research Station - Center for Forest Disturbance Science located in Athens, GA.

Global change is accelerating and there is considerable uncertainty surrounding effects on ecosystem processes. Predicting the impact of these changes will require accurate models of ecosystem processes and these models will be essential for guiding land management. The accuracy of these models depends on both the quality of inputs and proper scaling of data to inform model processes. This project will synthesize and evaluate long-term data on ecosystem carbon and nutrients in two southeastern pine forests that are required inputs to multiple landscape ecosystem models. In addition to assessing data quality assurance and quality control, we will investigate whether these data can be scaled appropriately for model use and detect issues associated with scale. The applicant will develop skills related to spatial and temporal scaling of data and explore the potential influences that scaling has on performance within and between models. Based on our data synthesis and scaling analysis, we will develop model performance-related questions for future ESTCP-Environmental Security Technology Certification Program, DoD - Department of Defense topics. This is an opportunity to work alongside several federal, state, and private agencies that work cohesively to provide quality data and analysis on ecosystem nutrient cycling. For instance, we will work directly with DoD (ESTCP) personnel to create model evaluation questions for proposed future projects. In addition, the applicant will work closely with a federal research assistant that will handle data synthesis, database management, as well as metadata development.

There are opportunities for gaining field work experience alongside the scientists and collaborators associated with the project, including obtaining their wildland fire red card certification if desired.

Ideal Candidates will:

Have a Ph.D. in a relevant field of research, which may include, forestry, ecology, ecosystem ecology, or equivalent environmental field. A M.S. degree will be accepted if the applicant can show considerable (2-5 years) post graduate experience in ecosystem ecology or ecosystem modeling.  
Have a strong background (course work, thesis/dissertation) in ecosystem

ecology, ecosystem or environmental science, exceptional data management skills, and moderate to advanced GIS skills. The applicant must have experience or background in ecological or environmental modeling. Demonstrate their ability to work independently and in groups.

The applicant must be a U.S. citizen.

#### Preferred Skills:

- Experience or background in: forest ecology, fire ecology, landscape ecology, fire or forest management, spatial analysis or spatial statistics, general statistics, and soil science.
- Familiarity with one or more programming languages, for example, R, python, or C++.
- Experience or background in landscape ecology.
- Field experience is a plus.

#### Details:

- Stipend Amount: \$66,000/year with annual increase
- Relocation Allowance: \$1,000
- Length of Appointment: Two years
- Travel Allowance: \$1,400
- Start Date: July 1st, 2014
- Number of Positions: 1
- Health Insurance Included
- Deadline: Until position is filled

#### Additional Information:

The program is open to all qualified individuals without regard to race, sex, religion, color, age, physical or mental disability, national origin, or status as a Vietnam era or disabled veteran.

The U.S. Forest Service Postgraduate Research Participation Program is administered by Oak Ridge Institute for Science and Education.

#### How to Apply:

Additional information and application materials:

[http://www.ora.gov/usfs\\_rpp/application.htm](http://www.ora.gov/usfs_rpp/application.htm)

Please send the following materials to [USForestService@orise.ora.gov](mailto:USForestService@orise.ora.gov)

- Application Form
- CV/Resume
- Letter of interest
- Three contact references with name and email
- Letters of recommendation are accepted but not required