

## **Postdoctoral Research Associate position available – NASA ABoVE Project:**

### **“Evaluating growing season length and productivity across the ABoVE Domain using novel satellite indices and a ground sensor network”**

There is an immediate opening for a postdoctoral position in photosynthetic carbon flux modeling as part of a newly funded NASA Arctic-Boreal Vulnerability Experiment (ABoVE) project (<http://above.nasa.gov/>). This position requires interdisciplinary skills involving the use of satellite (MODIS), eddy covariance and field data to model ecosystem processes, notably photosynthetic activity, productivity, and downregulation. This 12-month position is renewable for a period of up to 3 years.

**Primary Location:** School of Natural Resources, University of Nebraska, Lincoln. Some travel is required to attend meetings and to work with collaborators.

**Project Goal:** to develop and test a new light-use efficiency (LUE) model using data from NASA’s MODIS sensors and from field sites across the ABoVE Domain (Alaska and Western Canada). The model will be compared with independent assessments of carbon flux derived from existing LUE model algorithms (e.g. MOD17), Solar Induced Fluorescence (SIF), flux tower data, and ground-based optical sensors. Model development will include an emphasis on new pigment and water indices, allowing direct assessment of photosynthetic activity, light-use efficiency, and downregulation under stress. This model will undergo extensive testing and validation, and will be used to assess the effects of growing season length, climate variability, stress events, and disturbance on ecosystem carbon exchange and primary productivity.

#### **Requirements:**

- Ph.D. degree
- Demonstrated experience in the analysis of MODIS, eddy covariance, and/or ground-based optical data.
- Good knowledge of software and programming languages (e.g. ArcGIS, R, Matlab, Python, C/C++, and/or SQL).
- Familiarity with model sensitivity analysis and statistical methods.
- Understanding of plant physiology, including mechanisms of photosynthetic regulation and downregulation under stress.
- Willingness and ability to work with a diverse team of investigators from different disciplines (plant physiology, ecosystem carbon flux, remote sensing, and computing sciences/statistics) across a wide range of geographic locations across North America.
- Ability to work and travel in the US and Canada.

**To apply:** For further information, contact John Gamon ([jgamon@gmail.com](mailto:jgamon@gmail.com)) or complete a preliminary application (<http://gamonlab.org>). To apply, applicants should include a cover letter describing background and interests, CV, and names and contacts for 3 references.

**Application review** to begin Nov 1, 2015 and to continue until the position is filled.

*The University of Nebraska is committed to a pluralistic campus community through affirmative action, equal opportunity, work-life balance, and dual careers. See <http://www.unl.edu/equity/notice-nondiscrimination>.*