Post-Doctoral Position Available in Unmanned Aerial System (UAS) Remote Sensing of Plant Traits

The Terrestrial Ecosystem Science and Technology (TEST) group (http://www.bnl.gov/TEST/) at Brookhaven National Laboratory is seeking a post-doc interested in developing and using UAS platforms as a basis for monitoring and scaling plant traits. Specifically, this position will focus on building and integrating sensor packages for UAS platforms to develop links between optical, thermal,
and structural characteristics of vegetation canopies and biochemical and physiological traits governing carbon, water, and energy fluxes in the terrestrial biosphere. This research will primarily leverage spectroscopic remote sensing observations at the leaf to canopy scales in conjunction with thermal infrared (TIR) sensor data. The successful candidate will work closely with Drs. Serbin and Rogers to: 1) link UAS data with in-situ measurements, 2) use UAS data to measure the drivers of ecosystem function, and 3) provide spatially and temporally resolved trait maps.

The essential duties and responsibilities of the post-doc include-

Assemble, program and operate UAS platforms
Integrate payloads and navigation equipment on UAS platforms
Process instrument data, including remote sensing imagery, geolocation and navigation data, and image orthorectification
Calibrate and maintain UAS instrumentation payloads
Coordinate, measure, and scale key plant processes and traits to link with UAS observations
Publish results in peer-review journals and present at scientific conferences

Prospective candidates should have-

A Ph.D. in remote sensing science, plant biology, ecosystem ecology, ecophysiology, or a related discipline
Extensive experience with remote sensing data and its analysis
Background in the use of instrumentation for environmental monitoring, such as wireless instrument communication and data retrieval
Willingness to work collaboratively in team environments
Effective written and oral communication skills
Record of publication in high quality internationally recognized journals

Preferred Knowledge, Skills, and Abilities-

Experience with open-source programming environments such as Python and R, as well as geospatial tools such as GDAL
A strong statistical background
Experience building and maintaining instrumentation
Experience with digital imaging processing and spectroscopy
Ability to organize and orchestrate field campaigns
Experience using database systems such as PostgreSQL

Application Process-

Applicants should visit the BNL Careers website (http://www.bnl.gov/HR/careers/ ) and search for Job #180 to apply. Review of applications begins on February 2nd, 2015 and the position will remain open until a suitable candidate is identified. Our preferred start date is April 1st, 2015.

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