

Post-Doctoral Position Available in Remote Sensing of Vegetation Traits and Function (Hyperspectral Remote Sensing)

The Townsend Lab (<http://labs.russell.wisc.edu/townsend/>) at the University of Wisconsin-Madison is seeking a post-doc interested in using full-range hyperspectral imagery to understand vegetation physiology. Our NASA-funded research uses hyperspectral imagery ("imaging spectroscopy data") from NASA's AVIRIS-Classic and AVIRIS-NG sensors in conjunction with the thermal infrared sensor MASTER to map vegetation biochemistry and physiology. We use these data to: 1) understand the basic drivers of ecosystem function, and 2) as inputs to constrain ecosystem models. We integrate imaging spectroscopy with leaf and canopy level spectroscopic measurements, models, and data from eddy covariance flux towers. This work is collaborative with Drs. Shawn Serbin at Brookhaven National Lab, Ankur Desai and Eric Kruger at University of Wisconsin and Mike Dietze at Boston University.

The responsibilities of the post-doc include:

- Processing and analysis of AVIRIS-Classic and AVIRIS-Next Generation imagery;
- Linkage of imaging spectroscopy data and derived products to ecosystem models and eddy covariance tower observations in collaboration with other project investigators;
- Contribute to and write papers based on the analyses.

Prospective candidates should have:

- A Ph.D. in-hand in geography, biology/ecology, ecosystem or environmental science, or a related discipline,
- Extensive experience with remote sensing data and its analysis, and
- Strong statistical background, and preferably related experience programming in R, Python or IDL.

Desired skills include:

- Experience processing and analyzing hyperspectral imagery. However, experience with imaging spectroscopy data is not mandatory, although extensive experience with remote sensing data is necessary.

Candidates with backgrounds in physics, optics, computer science or modeling and an interest in ecological applications are also encouraged to apply.

Applicants must have excellent English writing and verbal communication skills, as well as the ability to work and lead a research team, are essential.

The position is available starting after January 1, 2015 (start date is flexible). The position is guaranteed for one year, with a second year pending satisfactory importance. Further years are contingent on funding.

University. Department. Labs:

The University of Wisconsin-Madison is one of the major research universities in the United States (www.wisc.edu). It ranks 2nd in research expenditures among all U.S. universities and first among public universities. Total student enrollment is 41,500, out of which 8,800 are graduate students. Employees include 2,000 faculty. UW-Madison has a long history of excellence in ecology, conservation biology, and wildlife biology (www.ecology.wisc.edu). The Townsend Lab maintains state-of-the-art facilities for remote sensing research, including computation power, as well as a broad range of field spectrometers, calibration equipment, and ecosystem measurement instrumentation.

Town:

Madison, Wisconsin consistently ranks as one of the best places in the United States to live, work, and study. It is Wisconsin's capital city, with a vibrant metropolitan population of approximately 500,000 that combines small town charm with a nice variety of leisure and cultural opportunities. For more information on campus and town see: <http://www.wisc.edu/about/location.php>.

Application Process:

Applications will be reviewed upon receipt and review will continue until a suitable candidate is chosen. Applications received before November 20, 2014 will be given full consideration. The University of Wisconsin-Madison is an equal opportunity/affirmative action employer. We promote excellence through diversity and encourage all qualified individuals to apply. The position is open to both US citizen and international candidates.

Interested applicants are asked to e-mail the documents listed below to Dr. Phil Townsend (in ONE PDF file please).

- Letter outlining research interests, academic and professional backgrounds
- Resume or CV
- Copies of transcripts (unofficial copies are acceptable)
- Names and contact addresses of three references

Questions should be directed to Dr. Townsend (ptownsend@wisc.edu).

Phil Townsend, Professor
Department of Forest & Wildlife Ecology
University of Wisconsin