Ph.D. Position in Remote Sensing of Vegetation (interest in UAVs and hyperspectral data is especially encouraged)

The Townsend Lab (http://labs.russell.wisc.edu/townsend/) at the University of Wisconsin-Madison is seeking a Ph.D. (or exceptional Master's) student interested in using remote sensing to understand the biology of ecosystems, which could include natural and/or managed systems in the Upper Midwest, USA. Our work involves studies at a range of scales, from the leaf to the stand or field to the landscape using spectral measurements and remote sensing imagery from handheld spectrometers, UAVs, airplanes and satellites. The primary focus of the prospective student will be the applications of hyperspectral imagery for mapping a range of properties, including plant growth, physiology, and vegetation responses to environmental drivers, pathogens and pests. Prospective students interested in using remote sensing for phenotyping and understanding genetics by environment (GxE) interactions are also encouraged to apply, as are students interested in using UAVs for remote sensing. Funding for a 12-month research assistantship and tuition remission is available for a minimum of three years, pending satisfactory progress. The research is supported by grant funds from NASA, NSF and USDA.

The position is advertised for Ph.D. student, but exceptional Master's candidates will also be considered. Prospective students should have:

- a degree in geography, environmental science, ecology, biology, agronomy or related discipline (Master's preferred for Ph.D. students, but Bachelor's considered with equivalent demonstrated experience/expertise or strong academic record), and
- experience in remote sensing and/or GIS, either through courses or work.

Please note that we will consider applicants with a range of experiences or expertise. Therefore, students with backgrounds in optics or engineering, computer science or modeling and an interest in biological applications are also encouraged to apply.

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

Stipend/Salary:
Current annual stipend levels are $21,224 per year before taxes, plus tuition remission and health care benefits. A start date of September 1, 2015 is envisioned, but students interested in starting in with the summer, 2015 field season (June 1) or earlier are also strongly encouraged to apply.

Application Process:
Applications will be reviewed upon receipt and review will continue until a suitable candidate is chosen. Applications received before April 10, 2015 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 our Student Services Coordinator Sara Rodock (rodock@wisc.edu) (in ONE PDF file please).
- Our departmental graduate application cover sheet (http://go.wisc.edu/oxbq0b)
- Letter outlining research interests, academic and professional backgrounds
- Resume or CV
- Copies of transcripts (unofficial copies acceptable at this point)
- GRE scores
- Names and contact addresses of three references

Questions (but not your application) should be directed to Dr. Townsend (phil.townsend@wisc.edu).

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. 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.