

POSTDOCTORAL POSITION AT UNIVERSITY OF WISCONSIN REMOTE SENSING AND SUSTAINABILITY

We invite applications for a postdoctoral research associate position in Remote Sensing for Sustainability. This 2-year position is part of a University of Wisconsin sustainability initiative

(<https://can01.safelinks.protection.outlook.com/?url=https%3A%2F%2Fsustainability.wisc.edu%2F&data=05%7C02%7Cdesrochers.melanie%40uam.ca%7C8863017f7d874d5d4cc808dc3325a597%7C12cb4e1a42da491c90e17a7a9753506f%7C0%7C0%7C638441483978311060%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzliLCJBTiI6IjEhaWwiLCJXVCi6Mn0%3D%7C0%7C%7C%7C&sdata=x1pSyo8KgDI17sCc7hp5O7r%2Fh2VFRL83f7I%2BDMiEaEY%3D&reserved=0>) effort to utilize remote sensing to quantify the ecosystem services from the natural areas that comprise about 1/3 of the university campus

(<https://can01.safelinks.protection.outlook.com/?url=https%3A%2F%2Fflakeshorepreserve.wisc.edu%2F&data=05%7C02%7Cdesrochers.melanie%40uam.ca%7C8863017f7d874d5d4cc808dc3325a597%7C12cb4e1a42da491c90e17a7a9753506f%7C0%7C0%7C638441483978318965%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzliLCJBTiI6IjEhaWwiLCJXVCi6Mn0%3D%7C0%7C%7C%7C&sdata=uUCei%2BhOshLrIlfLYkQS2pNSclz99JpEjhXaM%2Blvx8Q%3D&reserved=0>). The selected postdoctoral candidate will use airborne full-range hyperspectral imagery and LiDAR to develop a comprehensive baseline inventory of the carbon and nutrient status of the terrestrial ecosystems of these natural areas, including mapping of species composition. This effort will provide a basis for monitoring the carbon [C] status and nutrient dynamics (especially of nitrogen, N, and phosphorus, P) of natural areas within an urban matrix. The work will enable answering questions related to: 1) whether such natural areas are C sources or sinks, 2) their potential for C uptake (e.g. what is its photosynthetic capacity), and 3) what are the nutrient reserves in the vegetation and its soils. The postdoc will have an opportunity to work with new remote sensing measurements that will provide skills to work with data types expected from forthcoming missions from NASA and other space agencies. This project will also have synergies with concurrent efforts to quantify biodiversity.

We are looking for candidates with experience using remote sensing data and a background/interest in applications to terrestrial vegetation. Applications requested before March 31, 2024, with the position available to start as early as May of 2024 (start date negotiable).

Details and application instructions:

Interests and Qualifications:

Candidates may come from a broad range of disciplines, with key desired attributes being experience using remote sensing imagery and in data processing. Strong quantitative skills are also a plus. R and/or Python are our primary tools for data analysis and synthesis, and we have a large repository of open-source code available for the analyses envisioned for this project. Some experience in ecosystem measurements is also helpful.

The position is available to start in spring or early summer of 2024 with support for two years (and potentially a third) pending satisfactory performance. The successful candidate will work collaboratively with our team on implementing remote sensing methods to quantify baseline ecosystem characteristics necessary for sustainability assessments.

Applicants must have:

-PhD in a relevant field of study, such as Ecology, Plant Biology, Environmental Science, Remote Sensing, Geography, Statistics, Data Science or similar. Strong computational/statistical skills, experience with remote sensing data.

-Excellent English writing and verbal communication skills, as well as the ability to work as part of a research team.

Application Process: Postdoctoral positions are available to start Spring or Summer of 2024. Applications will be reviewed upon receipt and review will continue until suitable candidates are chosen. Preference will be given to applications received by March 31, 2024.

Please send the following to ptownsend@wisc.edu:

- Statement outlining research/professional interests and academic background
- Resume or CV and copies of transcripts (unofficial copies are acceptable)
- Names and contact addresses of three references Interested applicants are asked to e-mail the documents above to Dr. Phil Townsend at ptownsend@wisc.edu. Please send the documents compiled together in ONE PDF named YourSurname.pdf with "Sustainability Postdoc 2024" in the subject line.

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 citizens and international candidates.

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

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 citizens and international candidates. UW-Madison has a long history of excellence in ecology, conservation biology, remote sensing, and geography. The university ranks consistently among the top research universities in the United States. UW-Madison is an exciting place to learn and conduct research! The city of Madison ranks as one of the most attractive places in the U.S. to live and work. For information about campus and city, please see

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