Job announcement: **Faculty Assistant, University of Maryland, Environmental Science and Technology, College Park, MD.**

The Department of Environmental Science and Technology will soon post a job description for a full time Faculty Assistant. If interested in being notified when the full job posting is released, please contact Dr. Jyoti Jennewein at jyoti.jennewein2@usda.gov with the subject line: "Interest in UMD Faculty Assistant Position".

Background:
This position will provide remote sensing, soil landscape analysis, and geospatial analysis support for the Precision Sustainable Agricultural team (national network of sustainable agriculture scientists), and numerous private partners. The candidate will work with a team of applied agricultural scientists, technologists, and data scientists to assess cover crop and weed dynamics and crop water stress in agronomic cropping systems using a suite of remote sensing systems (satellite, airborne, UAV, tractor-mounted, field deployed) and soil landscape analysis techniques (digital soil mapping, spatial disaggregation, SSURGO analysis). The candidate will assess cover crop performance and weed presence spatially to inform decision support tools, modeling efforts, and precision technologies. Note: position details may be altered in the final job posting.

Duties and Responsibilities:
- Conduct and lead remote sensing research including image processing/analysis and terrain analysis.
- Conduct and lead soil landscape analysis (digital soil mapping, spatial disaggregation, SSURGO analysis)
- Conduct geospatial analysis of cover crop performance using a variety of remotely sensed data combined with field sampling and landscape analysis.
- Explore linkages between remote sensing, soil landscape analysis, and process-based biophysical crop growth modeling approaches.
- Assist with automation of data acquisition and integration from a wide variety of sensors.
- Support deployment, quality control, and analysis of a diverse set of remote sensing approaches to quantifying cover crop performance and weed presence in field crop production systems across a distributed network of researchers in the US.
- Conduct team-oriented research and exhibit exceptional leadership abilities.

Required job qualifications:
- PhD in applied agricultural or soil science, spatial statistics, landscape ecology, data science, remote sensing or related field.
- Expertise and experience in processing and analysis of remotely sensed data (optical, radar, lidar, etc.).
- Ability to process and analyze soil survey data and perform terrain analysis and digital soil mapping.
- Demonstrated ability to deliver and communicate scientific results and concepts.
- Established research credentials through publications in relevant refereed journals, and an existing record of, or strong potential for, successful grant procurement.
- Ability to work smoothly as part of a well-organized research collaboration.

Preferred job qualifications:
- Expertise and experience in processing and analysis of soil survey and topographic data.
- Expertise in soil variation in landscapes, soil mapping, and soil influence on plant growth.
- Experience with agricultural cropping systems and field data collection and/or analysis.
- Ability to develop, debug, and revise software code: e.g. Python, SQL, IDL, JavaScript, R, and/or Bash.
- Ability to migrate data streams into and out of the GIS software (e.g., ESRI, QGIS).
- Working knowledge of cloud platforms (Azure, AWS or GEE).
- Well-organized with strong writing and project management skills.

- Valid driver's license.

Key partners/mentors will include:
Dr. Brian Needelman, Department of Environmental Science and Technology, University of Maryland, College Park, MD 20742, bneed@umd.edu, 301-405-8227

Dr. Steven Mirsky, USDA-ARS Sustainable Agricultural Systems Laboratory, Beltsville, MD, steven.mirsky@ars.usda.gov, 240-304-9479

Dr. Dean Hively, USGS stationed at USDA-ARS Hydrology and Remote Sensing Laboratory, Beltsville, MD, whively@usgs.gov, 301-504-9031

Dr. S. Chris Reberg-Horton, Department of Crop and Soils, North Carolina State University, Raleigh, screberg@ncsu.edu, 919 515-7597

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EEO/AA Statement

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