Graduate Research Assistantship (PhD) Available to Quantify Rangeland Vegetation Structure and Function in the context of Fire at Boise State University and USDA Agricultural Research Service (ARS)

Boise State University Department of Geosciences, Human-Environment Systems, and the USDA ARS Northwest Watershed Research Center seek a motivated PhD student interested in developing the use of Unmanned Aerial Systems (UAS) for quantifying rangeland vegetation structure and function (e.g., plant basal and litter cover) in the context of ecohydrology. The study will also include applying these techniques to understand fire disturbance (e.g., severity) and recovery on the ecosystem. The student will have an array of UAS platforms and instrumentation (imaging spectroscopy, multispectral, thermal) available to them. Airborne imaging spectroscopy and lidar, and satellite remote sensing will also be used for questions related to upscaling across the landscape. The student will have the opportunity to collaborate with USDA ARS scientists in the western US, and work in a dynamic setting of remote sensing scientists at university and federal agencies. The student is expected to work in a team setting and perform field work.

About the program: The students will be active members of the Human Environment Systems (HES) group at Boise State University. HES is a group of faculty and students committed to transdisciplinary, team-based, actionable research that addresses real-world environmental challenges. The students can choose from among a range of PhD programs at Boise State University, including a PhD Ecology and Evolutionary Behavior, PhD Geosciences, PhD Geophysics, or PhD Computing. The student will be co-advised by Drs. Megan Cattau and Nancy Glenn.

Start date: August 2021 or earlier. The review of applications will begin January 2020 and continue until qualified candidates are hired.

Qualifications:
Minimum qualifications:
- Bachelor of Science or Arts (BS or BA) in Ecology, Biology, Geoscience, Conservation, Geography, Engineering, or a related field
- Experience working with remotely sensed data, ideally including UAS platforms
- Strong quantitative skills, including proficiency using R or other statistical, geospatial software
- Experience with spatial analysis, modeling, ecology, and/or social-ecological systems, as appropriate for the topics above
- Experience and/or interest working in collaborative, transdisciplinary teams grounded in mutual respect and responsibility
Preferred qualifications:
- Master of Science or Arts (MS or MA) in Ecology, Biology, Geoscience, Conservation, Geography, Engineering, Environmental Management, or a related field and research or job experience related to the topics above
- Experience working in wildfire ecology and/or restoration ecology
- Expertise collecting, compiling, and analyzing large datasets
- Programming experience in Python or other language
- Demonstrated research success through peer-reviewed publications and/or delivery of results to relevant stakeholders
- FAA Part 107 license or desire to acquire one

Description: The assistantship will include tuition, benefits, and a 12-month annual stipend. Three years of support are available through the funded research assistantship, with additional support available through Boise State University institutional funds.

To Apply: Please send via email to Drs. Cattau and Glenn, one PDF with the following:
- cover letter that states why you are interested in this position and if/how you meet each of the qualifications listed above;
- CV that includes employment history with dates of employment;
- names and contact information for three (3) professional references; and
- copies of transcripts (unofficial are fine).

Please include PhD application in the email subject line and include your last name in the file megancattau@boisestate.edu or nancyglenn@boisestate.edu. Informal inquiries are also welcome.

About Boise: Nestled in the foothills of the Rocky Mountains and the capital of the state of Idaho, Boise is frequently featured as a top-ranked metropolis. The city has ample opportunities for world-class outdoor activities year-round and a thriving arts and entertainment culture: http://www.boisechamber.org