

Postdoctoral Scholar at Oregon State University – forest resilience and recovery from fire and drought

The Landscape Ecology, Modeling, Mapping, and Analysis (LEMMA; <https://lemma.forestry.oregonstate.edu/>) team – an Oregon State University College of Forestry and USDA Forest Service Pacific Northwest Research Station collaborative research group working on vegetation mapping and landscape change – is seeking applicants for a postdoctoral scholar to lead on-going research projects mapping forest structure and change in heterogeneous forest landscapes influenced by wildfire using high-resolution aerial photography.

The [postdoctoral scholar](#) will join a research team in the Department of Forest Ecosystems and Society (College of Forestry) at Oregon State University on a project to improve vegetation monitoring tools and characterization of fine-scale vegetation conditions, especially in heterogeneous dry forests and post-fire environments, in the Pacific Northwest. This research seeks to integrate multi-scale field and remote sensing data sources, including Forest Inventory Monitoring (FIA) plots, moderate-resolution sensors like Landsat, high-resolution datasets including NAIP imagery, and, potentially, airborne laser scanning (ALS) or stereophotogrammetric point cloud data to produce fine-scale time series maps of vegetation structure and composition. The postdoctoral scholar will work with a team of scientists and analysts to leverage existing convolutional neural network models of vegetation attributes to (1) characterize and examine time series of post-fire forest structural responses, changes, and recovery and (2) build statistical models of the drivers of forest resilience, delayed mortality, and forest recovery in response to fire and drought. Candidates will also have the opportunity to collaborate on other regional monitoring and mapping projects related to fuels and mature/old-growth forest mapping. Candidates with experience in disturbance ecology, remote sensing, statistical modeling, and GIS are encouraged to apply.

Appointment basis: 1 year; extension to subsequent years may be available, depending on performance and available funding.

Anticipated appointment begin date: 1/1/2024, or as negotiated

Closing date/Full consideration date: 10/20/2023

Recommended Full-Time Salary: \$56,484-\$68,604, based on experience

Minimum/Required Qualifications:

- PhD in a natural resources-related field (e.g., ecology, forestry, geosciences) or Geography, by the start date of the position and received within five years.
- Familiarity with principles in landscape ecology, fire and disturbance ecology, forest ecology, and related fields.
- Ability to work independently and find creative solutions to aid the design of research projects and find answers to research questions.
- Thorough working knowledge of GIS and experience working with geospatial (raster and vector) data over broad regions.
- Advanced knowledge of remote sensing, image processing, statistical modeling, and large dataset management.

- Interest in applied science and demonstrated ability to communicate scientific research to government, academic, industry and/or NGO management partners
- Strong organization skills to keep track of the multiple facets of the project.

Preferred Qualifications:

- 3+ years experience with programming/scripting languages (e.g., Python, R, JavaScript).
- Experience using cloud-computing for GIS and remote sensing science, such as Google Earth Engine.
- 2+ years experience working with point cloud data (e.g. Lidar, digital aerial photogrammetry).
- Demonstrated scholarship through peer-reviewed publications and presentations.
- A demonstrable commitment to promoting and enhancing diversity, equity, and inclusion.

To apply or seek further information, please send the following materials to Cameron Naficy (cameron.naficy@usda.gov), David Bell (david.bell@usda.gov), and Meg Krawchuk (meg.krawchuk@oregonstate.edu):

- (1) A resume/CV;
- (2) A page cover letter (maximum two pages) indicating how your qualifications and experience have prepared you for this position, and describing why you're interested in the position
- (3) The names of three professional references, including email addresses and telephone numbers.

Additional information about this position, [including benefits package](#), can be found at <https://gradschool.oregonstate.edu/postdocs/open-positions>

OSU commits to inclusive excellence by advancing equity and diversity in all that we do. We are an Affirmative Action/Equal Opportunity employer, and particularly encourage applications from members of historically underrepresented racial/ethnic groups, women, individuals with disabilities, veterans, LGBTQ community members, and others who demonstrate the ability to help us achieve our vision of a diverse and inclusive community.