Department of Forest Engineering,
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Funded PhD student position: Burn the Burn: Building and maintaining resilient forests with cultural or prescribed fire in recently burned landscapes.

Supervisor: Dr. Christopher Dunn, Department of Forest Engineering, Resources and Management, College of Forestry, Oregon State University.

Science Collaborators: Dr. Dave Calkin, Wildfire Risk Science Team at Rocky Mountain Research Station, Dr. Graham Frank, College of Forestry, Oregon State University, and Andy McEvoy, College of Forestry, Oregon State University.

Project description:
The Wildfire Analytics, Science and Planning lab at Oregon State University is now accepting applications for a PhD student to investigate the application of fire in recently burned landscapes. The wildfire environment has become increasingly complex, expensive, and hazardous in recent decades because of historical fire and forest management, a changing climate, and an expanding wildland urban interface. Emerging from these trends is the greater understanding that business as usual may not be sustainable, such that significant change in how we view, respond, and manage fire is needed.

Specifically, this project will focus on expanding strategic fire planning and application in post-fire environment. Recently burned landscapes are increasing across the western US and will likely become the dominant condition soon. With change comes opportunity, especially for building a more resilient future of natural spaces. By viewing contemporary fires as initial landscape treatments, we believe the application of cultural or prescribed fire in post-fire landscapes (Burn the Burn) will be an increasingly important strategy for unraveling over 100 years of socio-ecological change, while maintaining a resilient socio-ecological system under a rapidly changing climate.

The successful candidate will investigate optimal strategic and tactical application of fire, ideally through the lens of cultural burning, and the various socio-ecological tradeoffs associated with these activities. This position will work alongside a post-doctoral fire ecologist and wildfire risk science experts, contributing geospatial technical and analytical skills (existing or learned) grounded in systems thinking. We will focus on applied research and development of decision-support tools that help advance collaborative forest restoration or maintenance, integrated natural resource planning, and wildfire risk response and mitigation. Both theoretical and applied research outcomes are expected.

The successful candidate will have:
A M.Sc. degree in geospatial or data analytics, wildfire management, ecology, or related field. Under exceptional circumstances we will consider experience in place of a M.Sc. degree. Applicants must meet the minimum entrance requirements for the Sustainable Forest Management program in the College of Forestry at Oregon State University.

Desired qualifications include a GPA >3.5 (4.0 scale). A strong background in quantitative methods and data or geospatial analytics, ecology, and a passion for applied wildfire research are beneficial. The strongest applicants will have demonstrated experience with programming languages commonly used for statistical analyses and scientific applications (e.g., R and Python), and familiarity with geographic information systems (e.g., ArcMap, QGIS).

Strong written and oral communication skills are also required, including humility and skills that foster co-production of research with Tribal Nations and federal agencies and practitioners.

A positive attitude, a strong work ethic and sense of accountability, as well as dedication to inclusive excellence are characteristics we expect of ourselves and those we work with.

Application instructions
To apply, please email the following as a single attachment to to chris.dunn@oregonstate.edu with the subject line: Burn the Burn:

- a cover letter that addresses your analytical/quantitative skills, experience with fire and fire ecology, and interest in the project,
- current CV,
- unofficial transcripts,
- writing sample and
- contact info for references as a single attachment to chris.dunn@oregonstate.edu with the subject line: Burn the Burn.

The successful applicant is expected to begin in Fall, 2024. The initial application deadline is January 19th, 2024, but review of applications will begin immediately and continue until a suitable candidate is found. Expediency is to your benefit. Once a successful applicant has been selected, a formal application to the University and Department is required. You may wish to apply in advance of January 1st, 2024, to be eligible for additional fellowships or funding.

Compensation
Students will receive a funding package of approximately $35,000 per year and tuition remission. This is primarily from research grants and internal fellowships but may include a combination of a graduate teaching assistantship. Further, during the first 2-3 years of the project, students working full-time in the field may be hired externally as technicians and, if so, would receive additional compensation.

For more information about the position, contact Dr. Christopher Dunn at chris.dunn@oregonstate.edu.