

Assistant Project Scientist
Search Plan & Position Description
JPF03188

INTRODUCTION: The Remote Sensing and Ecosystem Change Lab, at UC Davis' Land, Air, and Water Resources Department, focuses on improving our ability to monitor and understand ecosystem dynamics on a landscape scale. This provides support for more effective resource management, mitigation, and adaptation decisions. We are interested in how ecosystems respond to changing climate, fire disturbances, and management practices, and what the subsequent consequences are for energy, water, and carbon cycles. We primarily use remote sensing from satellites and airborne drones to monitor ecosystem dynamics, crop conditions and yields, and to study the associated drivers and feedbacks. Big data is transforming the ways we explore rapidly changing ecosystems. By better monitoring and understanding ecological processes, we hope to provide advanced geospatial tools and deliver information for sustainable agriculture and natural resources.

POSITION DESCRIPTION

MAJOR RESPONSIBILITIES

I. RESEARCH (95%)

Research activity (65%)

This position involves making creative contributions to and engaging in collaborative development and the expansion of active research programs in the areas of remote sensing and ecosystem change. The candidate will help to define and implement research goals in consultation with the Principal Investigator. He/she will work on (1) developing advanced remote sensing algorithms for multi-source data fusion and for monitoring crop/forestry ecosystem health and detecting disturbance; (2) building statistical models to quantify the relationships between climate, human activities, forest health, and wildfire risk; (3) generating scientific datasets of historical wildfire ignitions and future wildfire risks; and (4) developing data-driven decision support tools. The candidate is also expected to supervise students and staff in collecting new data, developing methods, trouble-shooting problems, interpreting results and planning follow-up experiments.

Grant Acquisition (10%)

The candidate will be responsible for identifying synergies and opportunities to pursue grant proposals. This will include taking the lead on writing proposals for extramural funding from federal and state agencies and other funding organizations, as well as working with teams of investigators applying for interdisciplinary proposals for research.

Publication activities (20%)

Candidate will take the lead in preparation of peer-reviewed articles, as well as participate as co-author in collaborative articles from group projects at RR. Candidate will also lead and participate in writing technical reports and articles for the popular press and social media.

II. PROFESSIONAL COMPETENCE AND ACTIVITY (5%)

The candidate will attend seminars and workshops to present research results and give oral presentations to public and professional interest groups.

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(ADVERTISEMENT)
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BACKGROUND: The Remote Sensing and Ecosystem Change Lab, at UC Davis' Land, Air, and Water Resources Department, focuses on improving our ability to monitor and understand ecosystem dynamics on a landscape scale. This provides support for more effective resource management, mitigation, and adaptation decisions. We are interested in how ecosystems respond to changing climate, fire disturbances, and management practices, and what the subsequent consequences are for energy, water, and carbon cycles. We primarily use remote sensing from satellites and airborne drones to monitor ecosystem dynamics, crop conditions and yields, and to study the associated drivers and feedbacks. Big data is transforming the ways we explore rapidly changing ecosystems. By better monitoring and understanding ecological processes, we hope to provide advanced geospatial tools and deliver information for sustainable agriculture and natural resources.

INTRODUCTION:

The Remote Sensing and Ecosystem Change Lab, through the Department of Land, Air and Water Resources at the University of California Davis, is searching for two Assistant Project Scientists to make significant and creative contributions to research in landscape ecology and sustainable agriculture, using remote sensing, geospatial technology, and machine learning approaches. Responsibilities will include: i) designing and implementing research studies, including utilizing existing long-term data sets; ii), and iii) writing original manuscripts. The Assistant Project Scientists, under the supervision of Principle Investigator, Dr. Yufang Jin, and in collaboration with our research team, will engage in all aspects of study design and execution, including data acquisition; statistical analysis, modeling and interpretation of results; preparation of manuscripts, report, and proposal; and presentation of findings at conferences and outreach events. We aim to recruit an outstanding individual, with the appropriate background/experience and creative energy, to interact with our many collaborators and work with minimal supervision.

Candidate should have a PhD Degree in Geography, Forestry, Environmental Science, or related field. Experience in remote sensing algorithm development and applications is required. Candidate should have strong analytical skills in multiple remote sensing data types and deep understanding of spatial statistics and time series analysis, good interpersonal and organization skills, and strong communication (oral and written) skills. Renewal of the contract will be contingent upon the availability of adequate funding and performance.

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BASIC QUALIFICATIONS:

- A PhD degree in Ecology, Geography, Forestry, Environmental Science, or other related natural science field.
- Experience in multi-scale and multi-sensor remote sensing research, including Landsat, SENTINEL-2, MODIS, VIIRS, hyperspectral, LIDAR, and UAV/drone techniques.
- Postdoc experience in remote sensing applications in natural ecosystems and agriculture.
- Strong quantitative background.
- Excellent statistical and programming skills, using big data and machine learning approaches.
- Experience in planning and leading field campaigns involving spectroscopy, plant science, and/or related subjects.
- Demonstrated ability to effectively communicate via writing and orally.

PREFERRED QUALIFICATIONS:

- Expertise in programming, including, but not limited to, R, MatLab, Python, and Google Earth Engine API.
- Experiences in image processing and GIS softwares, including ENVI, ArcGIS, QGIS.
- Experience in writing both proposals and a good track record in research publications (peer-reviewed and broader audience)
- Evidence of collaborative, interpersonal- and communication- skills.

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SALARY RANGE: Salary dependent upon candidate's qualifications/experience

TERM OF APPOINTMENT: 100% for one year (starting ASAP) with the possibility of extension dependent upon progress and funding.

TO APPLY: To apply, please go to the following link: <https://recruit.ucdavis.edu/apply/JPF03188>.

Candidates need to submit:

1. Cover letter describing your research interests,
2. curriculum vitae,
3. publication list,
4. copies of your three most important publications,
5. copies of undergraduate and graduate transcripts (if within 5 years of either degree), and
6. names, e-mail addresses, and telephone numbers of at least five professional references.

The search committee will begin reviewing applications after closing date indicated at the UC-Recruit job link. Applications received after closing date will only be considered if the position has not yet been filled.

This position will remain open until filled.

For technical or administrative questions regarding the application process, please contact metroexec@ucdavis.edu.

OTHER QUESTIONS: Please direct questions about the position to Dr. Yufang via email to yujin@ucdavis.edu

The University of California is an Equal Opportunity/Affirmative Action Employer. All qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, disability, age or protected veteran status. For the complete University of California nondiscrimination and affirmative action policy see: <http://policy.ucop.edu/doc/4000376/NondiscrimAffirmAct>.

Under Federal law, the University of California may employ only individuals who are legally able to work in the United States as established by providing documents as specified in the Immigration Reform and Control Act of 1986. Certain UCSC positions funded by federal contracts or sub-contracts require the selected candidate to pass an E-Verify check. More information is available <http://www.uscis.gov/e-verify>.

UC Davis is a smoke & tobacco-free campus (<http://breathefree.ucdavis.edu/>).

If you need accommodation due to a disability, please contact the recruiting department.