



Postdoctoral Position

Restoration Ecology with Sensor-Based Observation at Solar Parks

Owing to the immediacy of the position, applications are ***open for submission now and they will be reviewed on a rolling basis. Applications received before 25 October 2023 are guaranteed to be given full consideration. ***

Project Description: Prof. Rebecca R. Hernandez (www.GESLab.org), Prof. Alona Armstrong (www.lancaster.ac.uk/energy-lancaster/), and the multi-sector **UC Wild Solar Team** of the **Wild Energy Center** (www.WildEnergy.org) at the University of California Davis invite applications for a **postdoctoral scholar position** to assist in the conduction of **restoration ecology** activities and research, including the use of state-of-the-art, **sensor-based observation and monitoring**. The postdoc will have the opportunity to lead the design, implementation, and monitoring of habitat restoration at **ground-mounted photovoltaic solar parks** in the state of California. In addition to a supportive academic mentoring team, each UC Wild Solar Postdoctoral Scholar will be **matched with at least one non-university end-user 'Champion Mentor'**.

Photovoltaic solar energy development is expanding on land and water throughout the state of California. The rate of development is expected to increase such that solar energy is the dominant source of electricity. According to the California Air Resources Board (CARB) Scoping Plan, at least 72 gigawatts (GW) of photovoltaic (PV) solar energy capacity (with 37 GW of storage) is anticipated to fully decarbonize the state's energy system by 2045. Alongside this critical threshold for addressing climate change stands the need to address biodiversity loss. Native species in the state of California have been reduced by over 20%, 75% of the vegetation has been altered, and over 600 species are vulnerable to extinction owing to both climate change and habitat loss. The California prairie biome, a vegetation type with high soil carbon sequestration potential that once characterized the Central Valley, has been reduced in area by 95%. Given their interconnectedness, climate change and biodiversity loss are now referred to as the "twin crises," posing an existential threat to nature, people, economic prosperity, and security. The rapid buildout of PV introduces the potential for both adverse consequences as well as remarkable beneficial opportunities for certain California species and ecosystem services via restoration activities.

We seek a highly motivated scholar to assist in the implementation and research of habitat restoration activities at ground-mounted photovoltaic solar parks (GPVs) in California, including assessment and monitoring methods using state-of-the-art environmental and camera trap sensors.

This position will be one of several postdocs on the UC Wild Solar Team, with the others addressing topics including aquatic ecosystem ecology of floating photovoltaic solar energy and techno-economic assessment of biodiversity-friendly mitigation strategies for GPVs. Applicants may indicate their interest in any one of the open positions.



Job Duties: This position will involve **four major activities** building on lessons learned from pilot projects on seed-based restoration while incorporating novel developments based on the applicant's creativity and scholarship. First, lead the establishment of an environmental and observation-based sensor network (and data management) to collect weather, microsite, vegetation, soil, and animal phenomena at California GPV sites. Second, coordinate and lead the seeding, planting, and other restoration activities across habitat restoration treatment plots and zones at GPVs. Third, plan multi-site, coordinated data collection campaigns, and execute them. Fourth, use data collected to answer questions and test hypothesis related to understanding, optimizing, and predicting how target species respond to PV infrastructure, associated habitat and connectivity changes, and on-site biodiversity-friendly mitigation strategies in California ecosystems.

Given the interdisciplinary nature of the research, other professional skills and experiences that could be beneficial for hiring might include a background in or demonstrated experience with camera trapping, volunteer coordination and/or citizen science, big data management, translational ecology, animal ecology, geographic information systems, a desire and proficiency to publish in scientific journals, ability to communicate (oral and in print) research findings to multiple academic and nonacademic audiences, and/or transdisciplinary outreach to industry stakeholders.

Job Qualifications & Expectations: **Applicants must possess a PhD from an accredited university by 31 October 2023** in one of the following fields: Ecology, Restoration Ecology, Soil Science, Biogeochemistry, Environmental Science, Geography, Earth System Science, or a related field. The scholar will be expected to adhere to project goals and tasks, while taking initiative with duties. The scholar will be expected to collaborate compassionately, inclusively, and effectively among highly diverse peers, students, and as part of the larger multi-sector team from academia, local government, and nonprofits, spanning diverse disciplines.

Applicants must have:

- Restoration ecology experience;
- Experience in the selection, deployment, and/or management of environmental sensors and/or camera traps OR the strong desire to build these skills;
- Experience in spatial and temporal data analysis and modeling;
- Proficiency in coding in either R, Python, or related application;
- Proficiency in written and spoken English; and,
- Commitment to staying in the role for the entire two-year duration of the UC Wild Solar Project.

Owing to the nature of field research activities, remotely located employment is not an option. Demonstrated experience and skill with organization, time management, data management, oral and



written communication, and scientific publication are preferred. The successful candidate will receive training as needed to supplement their initial capabilities.

Salary & Benefits: The initial appointment duration for this 100%-time position is two years. All University of California postdoctoral scholars receive benefits and are paid according to a publically available, union-negotiated salary scale with mandatory annual increases, which can be accessed here: (<https://ucdavis.app.box.com/s/d2cv7dqvg2moyw5ymr1gokliyn3ddfzq>). The successful applicant's salary will be determined based on their individual status with respect to "step" criteria at the time their employment begins.

Application & Contract Information: Owing to the immediacy of the position, applications are ***open for submission now and they will be reviewed on a rolling basis***. Applications received before 25 October 2023 are guaranteed to be given full consideration. In addition to submitting the online application, candidates should send a copy of the following materials to <rrhernandez@ucdavis.edu>:

- (1) A well-crafted, single-page cover letter summarizing their research and career interests tying to their reason for applying for this job;
- (2) A curriculum vitae with a final sub-section listing contact information for three academic or professional references; and,
- (3) All applications (e-mailed as a single PDF file) should be addressed and emailed to Professor Rebecca R. Hernandez <rrhernandez@ucdavis.edu>.

Apply link: <https://recruit.ucdavis.edu/JPF06069>

University Information: The position is held within the Wild Energy Center (www.WildEnergy.org) and the Land, Air & Water Resources Department (<https://www.lawr.ucdavis.edu>) at the University of California, Davis. UC Davis is a smoke and tobacco-free campus (<http://breathefree.ucdavis.edu/>). 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. 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 UC Davis positions funded by federal contracts or sub-contracts require the selected candidate to pass an E-Verify check. More information is available at: <http://www.uscis.gov/e-verify>.

The University of California, Davis (UC Davis) is committed to inclusive excellence by advancing equity, diversity and inclusion in all that we do. UC Davis celebrates the multi-cultural diversity of its community by creating a welcoming and inclusive environment demonstrated through a variety of resources and



programs available to academics, staff, and students. Diversity, equity, inclusion, and belonging are core values of UC Davis that are embedded within our Principles of Community and are tied with how to best serve our student population. Our excellence in research, teaching, and service can best be fully realized by members of our academic community who share our commitment to these values, which are included in our Diversity and Inclusion Strategic Vision, our strategic plan: “To Boldly Go,” our Principles of Community, the Office of Academic Affairs’ Mission Statement, and the UC Board of Regents Policy 4400: Policy on University of California Diversity Statement. UC Davis is making important progress towards our goal of achieving federal designation as a Hispanic-Serving Institution and an Asian American, Native American, and Pacific Islander-Serving Institution. The Office of Diversity, Equity, and Inclusion offers a plethora of resources on their website, and the Office of Health Equity, Diversity, and Inclusion (HEDI) has outlined similar goals in their Anti-Racism and DEI Action Plan.” There is a plethora of links available where you can learn more about our Administration, Diversity and Inclusion, Rankings, Locations, Native American Land Acknowledgement, Sustainability, Visiting UC Davis, UC Davis Health, and Campus Safety.

The university is consistently ranked among the top institutions in the world for campus sustainability practices by the UI Green Metric World University Rankings. UC Davis is focused on achieving net-zero greenhouse gas emissions and repeatedly shown its commitment to preserving a healthy and sustainable environment for generations to come.

As a condition of employment, you will be required to comply with the University of California Policy on Vaccination Programs - With Updated Interim Amendments. All Covered Individuals under the policy must provide proof of receiving the COVID-19 Vaccine Primary Series or, if applicable, submit a request for Exception (based on Medical Exemption, Disability, Religious Objection, and/or Deferral based on pregnancy or recent COVID-19 diagnosis and/or treatment) no later than the applicable deadline. All Covered Individuals must also provide proof of receiving the most recent CDC-recommended COVID-19 booster or properly decline such booster no later than the applicable deadline. New University of California employees should refer to Exhibit 2, Section II.C. of the SARS-CoV-2 (COVID-19) Vaccination Program Attachment for applicable deadlines. All Covered Individuals must also provide proof of being up-to-date on seasonal influenza vaccination or properly decline such vaccination no later than the applicable deadline. Please refer to the Seasonal Influenza Vaccination Program Attachment. (Capitalized terms in this paragraph are defined in the policy.) Federal, state, or local public health directives may impose additional requirements.