Ecology-Energy Nexus Postdoctoral Scholar, UC Davis

Ranked #3 in World for Ecology and Environmental Science
Department of Land, Air, and Water Resources

Background | The postdoctoral scholar will engage in exciting, cutting edge research addressing both fundamental and applied questions in ecology and the interactions between species and renewable energy development at a university ranked #3 in the world for Ecology and Environmental Science. The aim is to 1) produce high-impact ecological data and research, 2) coordinate with and produce effective, high-quality reports for the California Energy Commission to address policy and management questions related to the siting and management of renewable energy infrastructure, and 3) develop a competitive, interdisciplinary research program at the vanguard of the energy-ecology nexus.

The postdoctoral researcher will be based at the University of California, Davis in the Land, Air, and Water (LAWR) Resources Department (see: http://lawr.ucdavis.edu/). The researcher will be advised by Dr. Rebecca R. Hernandez (Assistant Professor, LAWR, UC Davis). The scholar will have additional opportunities to interact with the world-class cadre of ecology, climate change, and energy science researchers and faculty at UC Davis, decision- and policy makers at the California capital city of Sacramento, and engineers with industry partners.

Research | The postdoctoral researcher will use traditional field experiments, advanced environmental technologies (e.g., environmental sensors, drones, remote cameras), and ecological and statistical modeling to assess how plants and animals respond to habitat modification within and adjacent to solar energy facilities across California Deserts. This research will quantify effects on rare plants (annual and perennial), an invasive plant and sensitive animals across a gradient of solar energy configurations, including sites within solar fields, mitigation areas, sites on the margin of a solar fields, and similar undisturbed locations. Concurrent monitoring of focal plant species and habitat conditions will provide information on how species spread or decline across this gradient of energy configuration. The postdoctoral researcher will also quantify variation in a set of essential species interactions between a rare, perennial plant (i.e., Asclepias nytagnetifolia, Mojave milkweed) and a sensitive insect (i.e., Danaus plexippus, monarch) across this gradient, including herbivory, parasitism, and predation (e.g., birds and bats). Analyses will project long-term outcomes for species through the integration of pre-existing data sets and data collected from new experiments.
Travel | The postdoctoral researcher will be required to travel (up to 8 weeks per year) to conduct and manage fieldwork at solar energy power plants and the Mojave, Sonoran, and Colorado desert ecosystems across southern California, notable for Joshua trees, bighorn sheep, 700 species of native bees, and 2,000 plant species.

Terms | The position should begin no later than 31 August 2016. Initial appointment is one year with funding for two additional years, contingent on performance and progress. Competitive applicants will be committed to the entire project duration of three years. UCD offers competitive salary and excellent benefits.

Desired Expertise and Interests | Aridland ecosystem science, coupled human and natural systems, data-intensive science, ecological modeling, global environmental change, entomology, land-energy-ecology nexus, plant ecology, renewable energy, sustainability

Qualifications | Desired candidate will:
- demonstrate strong quantitative and coding (e.g., R) skills and have prior fieldwork experience (management of ecological field teams is a plus)
- show a competitive record of peer-reviewed journal publications, data products, and commitment to scholarship
- embody independence, leadership, honesty, motivation, critical thinking, and problem-solving skills
- publish high-impact papers, prepare reports ahead of deadlines, present research at conferences, and mentor lab technicians and students
- create novel and engaging tools, applications, stories, photographs, outreach, and/or programs to connect their work to broader communities
- have earned a PhD in Ecology, Environmental Science, Entomology, or related field no later than 31 August 2016

How to Apply | Applicants should send application materials including:
1) cover letter (two page maximum, 12 size font, single space) describing their qualifications, research interests, career goals, and vision for their postdoctoral training;
2) a curriculum vitae (including ResearchGate, LinkedIn, and/or Google Scholar profile link);
3) two letters of recommendations from recent employer, advisor, mentor, or colleague; sent directly to RRHernandez@ucdavis.edu and,
4) names and contact information for three professional references, to RRHernandez@ucdavis.edu.

Contact information | Contact Dr. Rebecca R. Hernandez (RRHernandez@ucdavis.edu) with questions.

Open until Filled | This position will remain open until filled. Application review will begin on July 15, 2016 and applicants should submit materials no later than July 30 for primary consideration.