

POSITION ANNOUNCEMENT
ASSISTANT PROFESSOR IN *ECOINFORMATICS* IN THE DEPARTMENT OF
ENVIRONMENTAL SCIENCE, POLICY, AND MANAGEMENT
UNIVERSITY OF CALIFORNIA, BERKELEY

The Department of Environmental Science, Policy, and Management (ESPM) at the University of California, Berkeley is recruiting for a tenure-track (academic year) assistant professor faculty position in the field of Ecoinformatics with an expected start date of July 1, 2014.

Position Description: The department seeks candidates whose research, teaching and service position them to develop a world class ecoinformatics program that connects with one or more related programs on the Berkeley campus, such as the Berkeley initiative on Global Change Biology ([BiGCB](#)), the College of Natural Resources Geospatial Innovation Facility ([GIF](#)), or the Center for Computational Biology ([CCB](#)). We are seeking a candidate either with exceptionally strong computational and modeling skills or with extensive data mining and manipulation, and information management experience. We are particularly interested in candidates capable of linking physical and biological processes to obtain a comprehensive understanding of environmental and ecosystem processes. The successful candidate will be expected to offer an upper division undergraduate course in management and analysis ecological data and develop a cutting edge ecoinformatics course for graduate students in their sub-area of expertise. Candidates are also expected to contribute to diversity and equal opportunity in higher education through their teaching, research, and service.

Search Level: Assistant Professor

Rationale: *Ecoinformatics*, or ecological informatics, is the science of information in ecology and environmental science. Like the discipline of *Bioinformatics* which emerged in the field of molecular and cell biology to deal with the huge amounts of information generated first by genomic and more recently by transcriptomic, proteomic, and metabolomic studies, a parallel field of *Ecoinformatics* is emerging to encompass the interpretation of data relevant to ecological and broader environmental processes, especially problems posed by global climate and land use change. An impetus for Ecoinformatics is the accelerating accumulation of data sets from sources such as satellite imagery documenting the changing state of biodiversity in spatially explicit detail, automated sensors providing refined records of changing environmental conditions at particular locations, GPS tags on animals recording their movement trajectories with fine spatial and temporal precision, burgeoning ecological, spatial, temporal, and genetic data associated with natural history collections, large-scale long-term monitoring programs, and the rapid advent of citizen science data representing millions of species and population records. The growth in data has been accompanied by recent exponential gains in computing power and data storage capacity, as well as advances in computational statistics and mathematics.

The new challenges and opportunities opened by enriched data availability are promoting emerging scientific avenues including spatially and temporally explicit modeling of ecological processes, novel approaches in statistics quantifying uncertainty in a meaningful way for decision-making, and the ability to address complex, often large- scale, multidisciplinary problems in ecology and environmental science. There is an urgent need to assess, assimilate, and disseminate this information technology for application where the consequences of global change for ecosystem services, biodiversity conservation, and rural economies appear especially acute.

Justification: Ecoinformatics aims to facilitate environmental research and management by developing ways to access and integrate databases of ecological and environmental information, and develop new algorithms enabling different environmental datasets to be combined to test ecological and environmental hypotheses. The integrated application of biodiversity science, mathematics, computer science, computational statistics, and engineering to the study and management of ecosystems, is an emerging field that re-integrates the ecological sciences with information sciences through conceptualizing and modeling of complex ecosystems, software engineering for model construction and experimentation, information management and access, spatio-temporal database systems, data mining, and pattern recognition.

Qualifications: The minimum requirement to be considered as an applicant for this position is the completion of all doctoral degree requirements except the dissertation in an applicable area of research. The Ph.D. or equivalent is required by the date of hire. Post-doctoral experience in the ecological and environmental sciences demonstrating an ability to manage, visualize and analyze large sets of data is desired. Women and under-represented ethnic minorities are especially encouraged to apply.

Research Duties: Candidates must be self-motivated and show promise with regard to developing a world-class research program, although demonstrated ability to work in collaborative interdisciplinary teams will be regarded as an asset. Candidates will be expected to establish a research group that includes graduate and postdoctoral students, as well as providing research experience opportunities for promising undergraduate students.

Teaching duties: The successful candidate will be expected to offer an upper division undergraduate course in management and analysis ecological data and develop a cutting edge ecoinformatics course for graduate students in their sub-area of expertise. Candidates are also expected to share in teaching the department's required interdisciplinary graduate and undergraduate courses and contribute to diversity and equal opportunity in higher education through their teaching, research, and service

Space and Support Needs: The candidate will provided with an office space and laboratory space to meet their research needs, as well as a generous start up package to support the set up of their program and provide and initial stimulus its growth.

Applications will be accepted through January 10, 2014. Applicants should submit the following materials online at <http://aprecruit.berkeley.edu/apply/JPF00268>: 1) a cover letter, 2) a curriculum vitae, 3) a statement of research and teaching interests, 4) pdf copies of three peer-reviewed publications, and 5) three letters of recommendation (requested directly through our online application system). All letters will be treated as confidential per University of California policy and California state law. Please refer potential referees, including those submitting letters via a third party (i.e., dossier service or career center), to the UC Berkeley statement of confidentiality: <http://apo.chance.berkeley.edu/evalltr.html>.

Applicants may direct questions to ESPM_recruit@berkeley.edu. For additional information on the Department and the campus visit <http://ourenvironment.berkeley.edu>, and <http://berkeley.edu>.

The University of California is an equal opportunity, affirmative action employer.