

Postdoctoral Fellowship in Ecological Statistics

University of Notre Dame/University of California, Berkeley

A postdoctoral fellowship in statistical methods applied to paleoecological problems is available based either at the University of Notre Dame or at the University of California, Berkeley. The position is part of NSF-funded PaleON, a PaleoEcological Observatory Network to Assess Terrestrial Ecosystem Models, and is associated with Notre Dame's Environmental Change Initiative (ND-ECI). PALEON is an initiative to statistically estimate changes in forest composition in the northeastern U.S. over the past 2000 years using paleoecological data and to assimilate these estimates into ecosystem models. The postdoctoral fellow will lead the development of statistical models, based on spatial statistics, state space, and data assimilation methods, for the initiative, interacting with statisticians, paleoecologists, paleoclimatologists, and ecosystem modelers. The fellow will work with Dr. Christopher Paciorek at UC Berkeley and Dr. Jason McLachlan at Notre Dame, with extensive interaction with other PALEON team members. Specific modeling challenges may include spatio-temporal modeling of paleoecological data, state-space modeling informed by ecological models, modeling uncertainty in radiocarbon dating, and spatial modeling of vegetation based on colonial settlement-era historical records.

PALEON is an interdisciplinary research group of paleoecologists, statisticians, and ecosystem modelers working together to study how climate variations shape forest dynamics across a range of timescales. Specific goals include developing a coherent inferential framework with rigorous estimates of uncertainty for paleoecological data, applying these techniques to reconstruct variations in forested ecosystems for the last 2000 years from the Great Lakes to New England, and then assimilating the results into a suite of regional-scale ecosystem models. Postdoctoral researchers will work closely with each other and other members of the PALEON team towards these goals. Further details about PALEON may be found at [**www.paleonproject.org**](http://www.paleonproject.org).

Strong applicants will possess a background in Bayesian statistical modeling, especially spatial modeling, state space modeling, or data assimilation, as well as experience with MCMC computation. Applicants must be interested in working at the interface of statistics and ecology. The position is available for a two-year period, subject to annual performance review. We will consider applications on a rolling deadline, with applications received by October 21, 2012 guaranteed consideration. Funding is available for an immediate start. Please email your CV and a cover letter with the names and contact information of three references to Jill Deines (jillian.deines@gmail.com). Questions can be addressed to Chris Paciorek (paciorek@stat.berkeley.edu) or Jason McLachlan (jmclachl@nd.edu). The University of Notre Dame, an equal opportunity employer with a strong institutional and academic commitment to diversity, endeavors to foster a vibrant learning community animated by the Catholic intellectual tradition.