Quantitative Postdoc Position in Network Dynamics

We are seeking a postdoctoral associate to contribute to a NSF-funded project evaluating how perturbations propagate through plant-pollinator networks at different timescales. The postdoc will develop and analyze mathematical models of system dynamics, characterize interaction functional forms, and develop inference on plant-pollinator networks using data on species traits, pollinator visitation, and plant seed production. The overarching goal is to use data-theory integration to evaluate how short-term responses (hours to days; e.g., foraging behavior of pollinators, dynamics of floral rewards) affect medium-term responses (months to years; e.g., seed set, plant and pollinator recruitment) and how these, in turn, affect long-term network dynamics (decades to centuries; e.g., species persistence, extinctions).

The associate will be supervised by Dr. Fernanda Valdovinos in the Department of Environmental Science and Policy at UC Davis and will work collaboratively with the grantÃƒÂ¢Ã‚€Ã‚™s co-PIs Berry Brosi (Dept. of Biology, University of Washington) and Mark Novak (Dept. of Integrative Biology, Oregon State University).

Qualifications
Applicants should hold a PhD in physics, applied math, theoretical ecology, complexity science, or similar field. Previous experience should include the analysis of large datasets and analytical or numerical methods in mathematical modeling, including the use of machine learning and Bayesian methods.

Applicants should be fluent in Python and/or R, and ideally have experience programming in other languages, such as Matlab or Mathematica. The candidate should be capable of working independently and collaboratively. The researcher will be expected to prepare results for peer-reviewed journals, mentor students in the Valdovinos Lab, give conference talks, and contribute to grant-funded educational workshops.

Time Frame
Initial appointment will be for one year, with the possibility to extend to three years. The start date is flexible and the position is available immediately. The selected candidate will need to meet all UC Davis hiring requirements, including a background check, prior to the start date.

To Apply

To apply, please send electronically to Fernanda Valdovinos (fvaldovinos@ucdavis.edu) the following materials: a cover letter (which includes a brief summary of research experience and interests), a CV (with publication list), and names and contact information for three references. (Letters of references will be requested for finalists.) Applications should be submitted as one complete attachment.

Review of applications will begin immediately and will continue until the position is filled.

Address questions to Fernanda Valdovinos (fvaldovinos@ucdavis.edu), but if you are interested in the position we strongly prefer that you just apply, as there will be opportunities for finalists to ask questions at the interview stage.