

Post-Doc in Mathematical Demography and Ecology, University of Amsterdam

A Post-Doctoral position is available with Prof. Hal Caswell, in the Theoretical Ecology Research Group within the Institute for Biodiversity and Ecosystem Dynamics at the University of Amsterdam.

This position is part of a research program *Individual Stochasticity and Population Heterogeneity in Plant and Animal Populations*, which is funded by an ERC Advanced Grant. The overall goal of this research program is to develop a comprehensive theory for incorporating individual stochasticity and heterogeneity into demographic models, and for analyzing the consequences of these sources of demographic variation for population growth, structure, and persistence. Applications of the theory will include populations of conservation and management concern, evolutionary questions related to senescence and resource allocation, and the measures of health status and health expectancy in human populations.

This postdoctoral project will focus on mathematical and theoretical developments of Markov chain models for variation in lifetime reproduction and other measures of lifetime success, variation in longevity, and the incorporation of heterogeneity into branching process and diffusion models. Analyses will be developed at the level of cohorts (survival, longevity, lifetime reproduction, lifetime health status) and the level of populations (population growth, structure, persistence, and extinction) using matrix population models. Sensitivity analysis using methods from matrix calculus will be an integral part of the research. The development of new theory for multistate models, for stochastic environments, and for coupled populations will be an important component.

The Theoretical Ecology group currently comprises 2 professors, 3 assistant professors, 1 post-doc, and 4 PhD students, and currently hosts two ERC Advanced Grants. It has active research programs in structured population modelling, resource-consumer interactions, epidemiology, demography, and evolutionary and eco-evolutionary theory.

Requirements

- PhD in mathematical/theoretical ecology, mathematical biology, or demography, or in applied mathematics or statistics with experience in population biology, or similar background.
- Experience with development and analysis of population models;
- Programming skills; the project will use Matlab and possibly other languages;
- Fluent in English
- Good scientific writing skills
- Ability to work in a multidisciplinary research team.

For additional information, please contact Hal Caswell at h.caswell@uva.nl

To apply, please visit the University of Amsterdam website at:

<http://www.uva.nl/over-de-uva/werken-bij-de-uva/vacatures/item/13-418.html>

Applications should include a detailed CV with a list of publications, a description of research experience and interests, and the names and contact addresses of two academic references from whom information about the candidate can be obtained. Combine all these items into a single PDF file.

Applications should be sent by e-mail only before January 28, 2014 to application-science@uva.nl .

Please quote the vacancy number in the subject field. Interviews, possibly via Skype, will be held in after 28 January, 2014.

The positions will start in early 2014. The full-time appointment will be on a temporary basis for initially one year, with an extension to a maximum period of 3 years after a positive evaluation. The full-time gross monthly salary will range from € 2427 to € 3831. The Collective Labour Agreement Dutch Universities is applicable. The annual salary will be increased by 8 % holiday allowance and 8.3 % end-of-year bonus.