

PhD Position in Mathematical Demography and Ecology, University of Amsterdam

A funded PhD position is available with Dr. 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 on *Individual Stochasticity and Population Heterogeneity in Plant and Animal Populations*, which is funded by an ERC Advanced Grant.

Variation among individuals in reproduction, longevity, and other demographic traits, is universal. It has two potential sources: heterogeneity (biological differences among individuals in their properties) and individual stochasticity (random differences resulting from vital rates applied to identical individuals). The goal of this research program is to develop a comprehensive theory for incorporating individual stochasticity and heterogeneity into demographic models for plants, animals, and humans.

This Ph.D. project will involve both theoretical development and application of matrix population models, Markov chain models, and perturbation analysis to explore variation in longevity, lifetime reproduction, and other demographic properties. Applications may include populations of conservation and management concern, evolutionary questions related to senescence and resource allocation, and measures of health status and health expectancy in human and non-human populations.

The Theoretical Ecology group at UvA 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.

The candidate should have:

- A Master's degree, with strong quantitative skills, in ecology, population biology, or demography, or a degree in applied mathematics or statistics with experience in population biology.
- Interest in developing new theory in population biology.
- Good computer skills, including programming in Matlab or R.
- Willingness to work in a multidisciplinary environment;

To apply, please visit the University of Amsterdam web page at:

<http://www.uva.nl/over-de-uva/werken-bij-de-uva/vacatures/item/13-417.html>

Applications should be sent before 28 January 2014, via email, to :
application-science@uva.nl

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

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

The project starts early 2014. The full-time appointment will be on a temporary basis for a maximum period of four years (18 months plus a further 30 months after a positive evaluation) and should lead to a dissertation (PhD thesis). An educational plan will be drafted

that includes attendance of courses and (international) meetings. The PhD Student is also expected to assist in teaching of undergraduates. The full-time gross monthly salary will range from € 2,083 in the first year to € 2,664 in the final year, according to the Dutch salary scales for PhD students. 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.

Applications should include a detailed CV including educational experience, a list of publications, a letter describing research interests, and the names and contact addresses of two academic references from which information about the candidate can be obtained. Combine these materials into a single PDF file.