

PhD and Postdoc positions in 'Ecosystem Functionality and Stability' at the Laboratory of Systems Ecology and Resource Management (Complexity and Dynamics of Tropical Systems), Department of Organism Biology, ULB.

Description

The Laboratory of Systems Ecology and Resource Management (Complexity and Dynamics of Tropical Systems, Department of Organism Biology, Faculty of Science, Université Libre de Bruxelles - ULB) announces the opening of one PhD and one postdoc position for immediate start.

The **Laboratory of Systems Ecology and Resource Management / Complexity and Dynamics of Tropical Systems** (c/o Prof. Dr. Farid Dahdouh-Guebas) seeks to understand and to predict how and why spatio-temporal dynamics in vegetation and landscape occur.

It adopts a retrospective approach using relevant methods from different disciplines (botany, very high resolution sequential remote sensing and ground truth, phytosociology, socio-ecologic survey research, historic archive research,...), an integrative analysis (using geographical information systems, multivariate and multicriteria analyses,...) in order to generate outputs relevant for fundamental understanding of ecosystem functioning (status, resilience), for forecasting changes and for ecosystem management (preservation, restoration ecology). Within this framework we also emphasize on ecological and ethological plant-animal and man-ecosystem interactions. The mangrove forest is an important model in the research.

The project in which the vacant positions fit focuses on the functionality and stability of mangrove forests and integrates ecological and socio-ecological field data on the goods, services and functions of mangroves into a modelling framework. This research is done in collaboration with the Laboratory of Plant Biology and Nature Management of the Vrije Universiteit Brussel and numerous partners in the mangrove sites we study.

PhD (2 years, extendable)

The successful PhD candidate should have a Master in Bio-informatics and modelling, Biology, Bio-engineering, Mathematics, Geography (Geographical Information Systems), or equivalent. Any training or experience in mathematical or modelling software will be considered an asset.

Postdoc (2 years, extendable)

The successful postdoc candidate should have a PhD in Sciences (or equivalent) and have experience with the integration of interdisciplinary data into spatially-explicit individual-based or into agent-based models, or into other types of models designed to predict ecosystem development under different scenarios of human or climatic influences. He/She should demonstrate experience with the concepts of functional ecology (functional groups, functional traits,...), and with hysteresis and resilience applied to any ecosystem. The candidate should be familiar with Matlab, R or other similar software.

The candidate is expected to have a strong publication record. He/She will be expected to conduct research supervised by the project coordinator. A limited number of administrative tasks related directly to the research may be necessary.

How to apply ?

Applications should be sent **as a single PDF file** as soon as possible by e-mail to: Prof. Farid DAHDOUH-GUEBAS (fdahdouh@ulb.ac.be) bearing in the subject header : « **MIS PhD Vacancy** » or « **MIS Postdoc Vacancy** ».

There are no forms to be filled, but all applications should consist of :

- 1) a curriculum vitae including a full publication list,
- 2) a copy of the Master diploma including course transcripts,
- 3) a motivation letter in which the candidate explains how he/she expects to use his/her experience in the field of the vacancy, and what he/she expects from the PhD or postdoc stay,

and the postdoc applications should also provide :

- 4) a copy of the PhD diploma,
- 5) a text presenting up to five most significant publications of the candidate, and
- 6) a copy of these most significant publications.

Additional information

As stated by its statutes, the University of Brussels is a non discriminating institution and all its members are expected to adhere to its fundamentals principles. For any additional information (e.g. concerning courses to be taught or the research carried out in the Department) please contact Prof. Farid Dahdouh-Guebas (fdahdouh@ulb.ac.be), Head of the Research Unit or visit the following web page: <http://www.ulb.ac.be/sciences/biocomplexity/>



Department of Organism Biology