

MANTEL recruitment and PhD projects

Applications are invited for 12 Early Stage Researcher (ESR) PhD studentships on the Marie Skłodowska-Curie action (MSCA) European Joint Doctorate Innovative Training Network MANTEL within the Horizon 2020 Programme of the European Commission. Each vacancy is for a period of 36 months, with a starting date between 1 February 2017 and 1 July 2017 (dependent on individual project requirements -see individual project descriptions below). Recruitment will be on a competitive basis across all applicants. We offer either European Joint or Double Doctorates (depending on project) undertaking cross-disciplinary research working in top European research institutes in at least two different countries.

ELIGIBILITY - APPLICATIONS WILL ONLY BE CONSIDERED FOLLOWING AN ELIGIBILITY CHECK (also see individual project descriptions for individual project eligibility requirements).

- Applicants cannot apply for an ESR position hosted in a country where they have resided, worked or studied for more than 12 months in the 3 years immediately prior to the start of recruitment.
- Applicants should be in the first four years (full-time equivalent) of their research careers and not yet have been awarded a doctorate. This 4 year period is measured from the date of obtaining the degree which would formally entitle them to embark on a doctorate.
- The successful candidate must meet host institute requirements for entry to a doctoral programme.
- Any applicant whose first language is other than English must have certified English language proficiency of at least IELTS 6.5 or equivalent.
- NOTE: A full EU driving license is also essential for some individual positions.
- An ideal candidate will hold a Master's degree and have excellent marks from his/her previous studies and courses with preferably experience in one or more of the relevant fields (see project descriptions).

The initial deadline for applications is 10th January 2017, however note that the call will remain open as a rolling call until 30th April 2017. Positions which have been filled will be removed from the list below. Applications should be emailed to Ms Aideen Gaynor aideen.gaynor@dkit.ie. The application should include a Motivation Letter explaining background and future career interests, a Curriculum Vitae, an official copy of degree(s) (if applicable, an official English translation), course transcripts (if applicable, an official English translation), an English proficiency test result and the names and contact details of two referees. **In the letter of application, include up to four choices of PhD project from PhD Projects 1 to 12 in order of preference (see descriptions and project number on the links below).**

NOTE: contact names are given for further information on each individual project on the relevant PhD Project webpage. Recruitment will be a transparent and merit-based process in accordance with the 40 principles of the European Charter for Researchers and Code of Conduct for Recruitment of Researchers.

PhD Project 7 within MANTEL at IGB Berlin, Germany

Determination of critical thresholds for lake ecosystem resilience from long-term HFM data. See also: www.dkit.ie/mantel/mantel-recruitment-phd-projects

UPDATE 11th April 2017: this project is currently being shortlisted.

Based in: *Leibniz-Institute of Freshwater Ecology and Inland Fisheries, Berlin, Germany.*

Objectives: long-term changes are often of a non-linear nature, surpassing critical thresholds and leaving systems in a different state, often with temperature as a main forcing for a cascade of abrupt environmental changes. We know little about the temporal scales we need to consider for detecting change in resilience and how extreme events contribute to long-term trends and variability in ecosystem functionality. This PhD will use high frequency measurement (HFM) data to study the effects of episodic events on algal mass and lake metabolism as a proxy of ecosystem functionality, using the Metabolic Theory of Ecology as a universal concept. The PhD will test how general anthropogenic pressure acts to erode ecosystem resilience and brings the system closer to a critical transition. High taxonomic resolution long-term data will allow us to study the role of episodic events in the context of known long-term trends (30+ years) and short term recovery, and link overlapping effects of climate and other anthropogenic induced responses to overall ecosystem functionality. The overall objective is to quantify critical thresholds of the amplitude and frequency of episodic events affecting algal development and test whether generally available proxies can be used to capture human interferences with lake ecosystem functionality and resilience.

This student will be primarily based in Berlin at the Leibniz-Institute of Freshwater Ecology and Inland Fisheries, Germany, supervised by Prof. Rita Adrian, and will be co-supervised by and spend study time with Prof. Bas Ibelings, University of Geneva. The PhD will be a double degree awarded by the Free University of Berlin and University of Geneva.

Specific requirements (keywords): *MSc, Ecology, Statistics Bioinformatics, Mathematic,* We are looking for a highly motivated early stage researcher with interest in aquatic ecology, particularly in long-term ecological research in the context of global climate change impacts on lake ecosystems. Specifically we are interested in the effects of episodic events such as storms, heat waves or heavy rain events on lakes from lake physics all the way up to plankton communities and lake metabolism. The research will be based on existing decadal long-term data of lakes around the globe and our prime case study site Müggelsee in Berlin, Germany. It will be primarily based on statistical or deterministic modelling.

Please fill in the Application Form at: www.dkit.ie/mantel/mantel-recruitment-phd-projects

SPECIFIC REQUIREMENTS:

Academic qualifications: Candidates must have an MSc in Ecology, statistics, bioinformatics, or similar.

Technical Skills required: Good programming skills in typical scientific programming languages (e.g., Matlab, Python, R, etc.). Strong skills in statistical modelling; capability in handling large data sets are essential.

English language: Any applicant whose first language is other than English must have certified English language proficiency of at least IELTS 6.5 or equivalent.

Contact for more information: *Rita Adrian* adrian@igb-berlin.de

Host information see: www.igb-berlin.de/en

Mantel information: www.dkit.ie/mantel/mantel-recruitment-phd-projects

Please upload your complete application via IGB's online-job-market at <http://www.igb-berlin.de/job-offers.html> (button "Apply online") until **9th of July 2017**.