



Leibniz-Institute of Freshwater Ecology and Inland Fisheries

The Leibniz-Institute of Freshwater Ecology and Inland Fisheries (IGB) is the largest freshwater ecology research institute in Germany with close links to all universities in Berlin and Potsdam. The IGB is part of the Forschungsverbund Berlin e.V. (FVB). IGB provides excellent laboratory and field facilities for interdisciplinary research.

The department of Ecosystem Research in Berlin-Friedrichshagen offers a

Master thesis in eco-physiology of algae studying the **Effects of fluctuating light on growth and photosynthesis of phytoplankton**

Motivation:

Planktonic algae (phytoplankton) are the most important primary producers in many aquatic ecosystems. Phytoplankton development is potentially controlled by light availability, which fluctuates rapidly by wind-induced mixing of the water column. Light-dependency of phytoplankton growth has been traditionally measured under constant light but first studies demonstrated strong effects of light dynamics.

Aims:

The study should contribute to a better understanding of phytoplankton dynamics in well-mixed waters like shallow lakes, rivers and estuaries.

Approach:

- Cultivation of phytoplankton species
- Semi-continuous growth experiments under constant and under fluctuating light of the same mean intensity
- Measurement of changes in biomass using fluorometric methods, HPLC-based pigment analyses, flow cytometry and carbon analyses
- Measurement of electron transport rates and oxygen production as proxies of photosynthesis
- Measurement of intensity and spectral composition of light

Advantages:

Intensive supervision, stimulating working atmosphere

Requirements:

Master study in plant physiology, biophysics, aquatic ecology or ecology in general; experience in lab work, strong motivation for scientific work, proficiency in English; co-supervision by a professor of your university.

In keeping with the IGB's policy regarding gender equality, female applicants are particularly encouraged. Severely disabled applicants with equal qualification and aptitude are given preferential consideration.

Enquiries or questions can be directed to Alexis Guislain (guislain@igb-berlin.de) or Dr. Jan Köhler (koehler@igb-berlin.de). Please apply online via <http://www.igb-berlin.de/en/jobs>.