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. IGB offers excellent laboratory and field facilities for interdisciplinary research, large-scale experimental facilities, and long-term research programs and data sets. Much of the practical part will be conducted at Dep. 3 in Neuglobsow by the picturesque Lake Stechlin, where an international team of ca. 50 person work, with an active and social student environment, and where we can offer access to competitively priced student housing. We offer a

Master thesis

"Development and validation of deep learning auto recognition methods for a new state-of-the-art zooplankton scanner"

We invite you to join the development of a high-throughput laboratory instrument aiming to make ground-breaking improvements in methods for aquatic ecology. The candidate will join a motivated team that recently developed a computerised camera-setup quickly producing high-resolution full colour images of zooplankton samples, to be used for automated species recognition.

The main practical task will be to digitalize samples and create a dataset of identified zooplankton images. To ensure a successful completion, zooplankton experts and the designer of the camera-setup will closely supervise the thesis work. Thus, previous knowledge of zooplankton or handling of laboratory instruments are not necessary, but advantageous. Depending on the interests of the candidate, further contribution to developments of any part of the overall approach is encouraged, including image acquisition and the on-going use of the latest deep learning auto recognition methods. Overall aim is integrating a data-intensive, machine learning approach with a hypothesis-driven, mechanistic approach enabling novel knowledge.

Requirements:
Master study in Biology, Computer science, Ecology, Environmental science or in relevant disciplines; proficiency in English

Candidates will be evaluated, immediately, and the project will be open until filled. 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 PhD-student Tim Walles (walles@igb-berlin.de) or
Dr. Jens Nejstgaard (nejstgaard@igb-berlin.de).

Please upload your complete application documents no later than **31st October 2017** via the IGB's (http://www.igb-berlin.de/en/jobs) online job-application facility (button "Apply online").

We are looking forward to your application!