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Two PhD student positions at Physics of Aquatic Systems Laboratory

The Laboratory of Physics of Aquatic Systems (**APHYS**) at ENAC / EPFL Lausanne (Switzerland) has **two** openings for PhD students.

The team at EPFL, in collaboration with Eawag Kastanienbaum, focuses on physical processes in natural waters (lakes, reservoirs, etc). Information on the group is available at: http://www.eawag.ch/forschung/surf/schwerpunkte/physics/index_EN. Recent projects concentrate on particles in lakes, deep-water oxygen consumption, double diffusion and remote sensing.

PhD Project 1 – The hypolimnetic oxygen depletion depends on (i) available oxygen in near-sediment waters of the bottom boundary layer (BBL), (ii) the amount of recently settled organic matter at the sediment surface and (iii) the flux of reduced substances from the sediment to the BBL. The research work will comprise diffusive-boundary/sediment oxygen micro-profiling, sediment porewater profiles, water column (CTD) profiles, and large-scale hydrodynamic modelling to reconstruct the past 50 years of oxygen depletion in a large peri-alpine lake.

PhD Project 2 – Lake-based water supply systems depend on the intake of water with low particle content. The aim of the project is to develop an experimental procedure to minimize particle intake. The research work will comprise ADCP current meter profiling, sediment core / trap measurements, water column (CTD) profiling, river input load analysis and large-scale hydrodynamic modelling in order to construct past and future particle intake loads.

Your profile

- MSc in natural sciences or environmental sciences/engineering (or equivalent) with good background in math
- Research interest in system analysis and large-scale modelling
- Motivated in conducting fieldwork and in dealing with ill-defined environments
- Interest in a scientific career and in interdisciplinary project collaboration
- Good knowledge of English (French or German is of advantage).

Starting date: immediately, on the basis of competitive application (position is open until filled; start of interviews after 20 September 2012).

Contract duration: four years (1/2 year probation); acceptance by doctoral program required

Contact

Applications should include the CV including degree certificates, a motivation letter along with two contacts for reference letters. Please send your application by e-mail to the APHYS team leader Prof A Wüest (alfred.wueest@epfl.ch) or by post mail (Physics of Aquatic Systems Laboratory, ENAC, EPFL, GR A2-434, Swiss Federal Institute of Technology, CH-1015 Lausanne).