



Vacancy for a PhD student in Hydrology / Computer engineering

Starting date: as soon as possible (winter/spring 2012/2013)

We announce a position for one PhD student within the SNF-funded, three-year interdisciplinary research project

Intelligent sampling of hydrological events (ISHE)

at the University of Zurich, Department of Geography, Unit Hydrology & Climate (<http://www.geo.uzh.ch/h2k/>) and the Computer Engineering and Networks Lab (TIK), ETH Zurich (<http://www.tec.ethz.ch/>).

Stream water sampling during hydrological events is important, but also challenging, because stream water chemistry can vary largely during events and the number of samples which can be taken is limited due to practical constraints. This project will contribute towards better observations of the temporal variability of stream water chemistry (including isotope composition) by intelligent sampling strategies using online control. This will support both hydrological research and monitoring.

The specific objectives of this project are the following:

- Identification of optimal sampling distribution during events based on perfect information (i.e., in hindsight) to maximize the information gained by a limited number of water samples
- Formulation of sampling strategy under real conditions, where sampling decisions have to be made based on (uncertain) forecasts
- Development of technical implementation strategy for the instrumentation of a forecast-based sampling

Applicants should have a Diploma or MSc degree in hydrology, climatology, meteorology, environmental sciences, computer engineering, networking or in a closely related field. Strong numerical skills, including programming and data processing, are a prerequisite. We encourage applications from enthusiastic dedicated individuals with good oral and written communication skills (English) who enjoy working in a team. Previous experience in hydrological modeling, data bases, data management or (online-)measurement techniques are considered a plus.

We offer an interdisciplinary, international work environment and formal PhD program (<http://www.geo.uzh.ch/en/graduate-school/>). Salary is according to the salary scale of the Swiss National Science Foundation (SNF).

Please send your application including cover letter, CV, relevant diploma, an example of your own scientific writing (if available) and the names and contact details of at least two potential references in one pdf-file to Lukas Japp (lukas.japp@geo.uzh.ch). Review of applications will begin on November 30, 2012, and continue until the position is filled (after Nov 30 please check on <http://www.geo.uzh.ch/en/units/h2k/about-us-staff/open-positions> whether the position is still open).

For questions:

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