

PhD position in Neuchatel, Switzerland

Geometry, genesis and hydrodynamic of the Yucatan karstic system

You are a young scientist who wants to work on challenging mathematical and numerical modeling problems having a high societal impact. You do not want to model things that you did not measure. You do not want to collect data without doing the modeling. You are not afraid of doing and learning new things. You are able to defend your vision and you know that making a step forward in sciences requires hard work. Ideally, you have a **master degree in earth or environmental sciences, computational sciences, physics, or applied mathematics**. You have good experimental capabilities and can communicate easily in English.

The stochastic hydrogeology group (<http://goo.gl/a9b4n>) is a small eclectic team (geologists, engineers, mathematicians) within the University of Neuchatel. We offer a friendly and effective working environment settled in a beautiful landscape of lake and mountains. The University hosts about 4'000 students and is located in the French-speaking part of Switzerland.

The project (3 years) aims at measuring, understanding and modeling the geometry, genesis and dynamic of groundwater flow in the karstic system of the Yucatan peninsula. The measurements will be performed in Mexico in close collaboration with geophysicists from the Austrian Geological Survey and local scientists. The modeling will include stochastic and deterministic aspects (finite elements). Uncertainty quantification will play a key role during the whole project. The results will contribute to provide a scientific basis for the protection of marine ecosystems endangered by the possible reinjection of wastewater into the karst due to urban development.

Applications must include a curriculum vitae, a complete academic transcript including undergraduate and graduate courses, copies of diploma/certificates, contact information of 2-3 potential referees, a short description of research interests, and should be sent to: philippe.renard@unine.ch as soon as possible. The selection of the candidates will start in mid-July, to start as soon as possible but not later than December 2012.