

Uppsala University hereby declares the following position to be open for application:

## **PhD student position in Glaciology**

at the Department of Earth Sciences, for the topic:

### **“Water retention in Arctic glaciers”**

Arctic glaciers are predicted to respond to warmer temperatures during this century. Warmer temperatures will result in increased melting and mass loss from Arctic ice masses, and subsequently lead to rising sea levels. Numerical mass-balance models are often used to predict future melting rates of ice masses. In more simplistic model-approaches surface melt is assumed to be direct run-off. However, in many cases melt water is stored in the porous firn, either as liquid water or as refrozen ice. The objective of the project is to improve the understanding of water retention and formation of superimposed ice in the snow and firn packs of Arctic glaciers. The aim is to improve the parameterization of water retention in mass-balance models and to assimilate this into Earth System Models. The project will study the surface energy budget in field experiments as well as controlled lab experiments where carefully monitored injection of melt water will be carried out in conjunction with spatial monitoring of thermodynamics inside the observed snow/firn column.

The position is announced as a part of the project "Stability and Variations of Arctic Land Ice" (SVALI) under the Top-level Research Initiative (TRI, <http://www.toppforskningsinitiativet.org>) which is a major Nordic collaborative venture for studies of climate, energy and the environment. SVALI is a Nordic Centre of Excellence within the TRI sub-programme "Interaction between Climate Change and the Cryosphere" (ICCC) which aims to improve our understanding of stability, variations and dynamics of the cryosphere.

For additional information on the research activities, please see the SVALI web page (<http://www.ncoesvali.org/>), the Uppsala University Air, Water and Landscape Science web page (<http://www.geo.uu.se/luva/>), and the glaciology group page (<http://www.geo.uu.se/glaciology/>).

You are welcome **to submit your** application no later than 20 February, 2011, UFV-PA 2011/264. Use the link to access the application form at <http://www.personalavd.uu.se/ledigaplatser/engindex.html> (where the official add will be placed in short).

For questions on the position, contact professor Veijo Pohjola, e-mail: [veijo.pohjola@geo.uu.se](mailto:veijo.pohjola@geo.uu.se).