PhD Job Announcement

The University of Fribourg is located in central western Switzerland, at the foothills of the Swiss Alps. The university has about 10’000 students across all scientific disciplines. Being part of the Faculty of Science and Medicine, the Department of Geosciences comprises approximately 90 employees and offers various BSc and MSc programs in Earth sciences, in geosciences and geography.

The Cryosphere group within the Department of Geosciences has a staff of c. 25 and has strong expertise in surface and subsurface processes of glaciers and ice sheets, permafrost and geophysics. The Cryosphere group is looking for a

PhD student in "Observation & model representation of past and current firn changes"

This 4-year PhD position is part of the deFIRN project and is funded by the Swiss National Science Foundation (SNSF). The project is a collaboration between University of Fribourg (Martina Barandun and Horst Machguth), the WSL Institute for Snow and Avalanche Research SLF (Ruzica Dadic), and ETH Zurich (Evan Miles). The core team consists of the 4 PIs, 4 PhD students, and 4 Postdocs and aims to quantify the impact of disappearing firn on mountain glaciers. The project also features a broad network of partners in Europe and Central Asia.

The aim of this PhD position is to measure the changes in firn on glaciers in Switzerland and Central Asia, with particular focus on repeating historical measurements and quantifying how the firn has changed since then. Special focus will be on firn temperature, firn density and stratigraphy. The PhD student will use existing and new measurements to improve existing firn parameterizations and develop new algorithms to simulate the key processes governing the ongoing firn changes. The position is based at the Department of Geosciences of the University of Fribourg and will be supervised by H. Machguth and co-supervised by R. Dadic and W. van Pelt (University of Uppsala, Uppsala, Sweden).

This may be the perfect position for you if you have a master’s degree in environmental science, geoscience, engineering, physics, or a related field, you are interested in the cryosphere, you have experience in computational data analysis or modelling, and if you are eager to work on mountain glaciers in the Alps and in Central Asia. Very good verbal and written communication skills in English are required, French or German is an asset.

If you are interested, please send your application *(merged into one PDF file)*, including (1) motivation letter, (2) CV (including list of publication, if applicable) with contact details of at least two references, and (3) educational transcripts directly to Horst Machguth (horst.machguth@unifr.ch). The evaluation of applications will start 11 February and will continue until the position is filled. The optimal starting date for the PhD candidate is April 2026, but there is some flexibility. Please contact horst.machguth@unifr.ch if you have questions. University of Fribourg is committed to diversity and inclusion. We actively promote equality and foster an open, inclusive work environment.