

The Department of Geography at the Faculty of Geo- and Atmospheric Sciences at the Leopold-Franzens University of Innsbruck seeks to fill a

PhD student position in snow modelling and hydro-climatological data analysis

to start on October 1, 2024. Project duration is 3 years.

We seek an individual who pursues innovative research in the field of climate change effects on the snow hydrological conditions in Tyrol (Austria). The successful candidate should be particularly interested in physically-based simulations of the snow cover evolution, forced with high resolution datasets. Further, extensive climate data sets have to be analyzed in order to assess the historical and potential future climatological and hydrological conditions. These datasets comprise local observations, satellite images and raster datasets originating from climate model simulations.

The open position is embedded in an interdisciplinary project team which is financed by the Austrian Climate Research Programme (ACRP). The project investigates the impact of changing climatic and snow-hydrological conditions on selected parasites and vectors. Interdisciplinary integration is realized by joint development of indicators to be applied in the analyses.

The successful candidate will be member of the working group „Human-Environment Systems Research“ at the Department of Geography at the Faculty of Geo- and Atmospheric Sciences at the Leopold-Franzens University of Innsbruck, lead by Prof. Ulrich Strasser. As an outcome of the scientific track of snow hydrological modelling of the group the open source snow-hydrological model openAMUNDSEN has been developed (<https://github.com/openamundsen/openamundsen>). This model will be applied in the project.

TASKS

- Analysis of climatological and snow-hydrological datasets for Tyrol (Austria)
- Joint development of indicators to describe the climatic and snow-hydrological conditions
- Setup and application of the openAMUNDSEN snow-hydrological model
- Evaluation of simulation results
- Close cooperation with the project partners of the Vetmeduni Vienna
- Scientific publication of research methods and results

REQUIREMENTS

- Master degree in one of the geosciences, in climatology or in hydrology

- Basic experience in programming (Python and/or R would be an advantage)
- Basic experience in numerical modelling
- Motivation to work with a numerical snow-hydrological model
- Motivation to process large datasets, among other satellite images
- Systemic thinking and interpersonal communication skills for team work
- Fluency in English
- Basic knowledge of German or willingness to learn it
- Strong motivation to achieve a PhD degree

The successful candidate will enter a 3-year working contract for 30 h per week. Workplace will be Innsbruck/Austria. A salary according to the Austrian Collective Labor Agreement for University personnel with a wage of € 2.684 /month (14 times per year) is foreseen.

Leopold-Franzens-University Innsbruck seeks to increase the proportion of females in the faculty. Applications from qualified female scientists are therefore especially encouraged. In accordance with Austrian disability laws, qualified people with special requirements are expressly encouraged to apply.

If you are interested, please send your documents (motivation letter, CV, graduation certificates) to ulrich.strasser@uibk.ac.at.

We are looking forward to receiving your application by June 30.