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**UNIVERSITÄT  
BERN**

Geographisches Institut, Hallerstrasse 12, CH-3012 Bern

Philosophisch-  
naturwissenschaftliche Fakultät  
Geographisches Institut

Bern, August 2021

## Two PhD positions in hail research in Switzerland at the University of Bern

We invite applications for two 3-yr PhD positions within the SNF Sinergia Project “*scClim - Seamless coupling of kilometer-resolution weather predictions and climate simulations with hail impact assessments for multiple sectors*”. The main goal of this interdisciplinary project is to establish a seamless model chain from the simulation of thunderstorms to the quantification of hail impacts in Switzerland and thereby contribute to reducing the socio-economic impacts of weather phenomena in a changing climate. The two PhD positions will be part of the *Mobilier Group for Climate Impact Research* at the University of Bern. In this group we study and quantify the spatio-temporal characteristics of climate risks and natural hazards and their impacts upon the Swiss society. The focus is on applied research and practical applications. The group is part of the Oeschger Centre for Climate Change Research at the University of Bern.

### Job description

In the five subprojects of scClim, scientists and stakeholders from various disciplines and institutions will collaborate closely to advance and create a long-lasting impact on the understanding and management of hail risk in Switzerland and beyond. We therefore seek two candidates who are highly motivated to work in such an environment of inter-and transdisciplinary spirit.

#### Position 1: Model validation and polarimetric hail products

You will use radar-based hail information to validate high-resolution numerical weather and climate model simulations run by the project partners. This entails further develop an algorithm to detect differential reflectivity columns in polarimetric radar information and to link the column characteristics to hail stone characteristics. In this project you will closely collaborate with the radar team of MeteoSwiss.

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## Position 2: Decadal variability

You will use statistical tools to quantify interannual and decadal-scale hail variability in Switzerland and potential changes in the seasonality in the 20<sup>th</sup> century. You will also investigate the large-scale drivers of hail rich and hail poor summer seasons in Switzerland.

The PhD projects will be supervised by Prof. Dr. Olivia Romppainen-Martius (Institute of Geography, University of Bern) and Dr. Urs Germann (MeteoSwiss)

## Your profile

Requirements are a master's degree in atmospheric, climate, or environmental science, but applications from other relevant backgrounds and/or operational / industry experience with demonstrated knowledge of natural hazard or climate impact modeling are welcome. Besides being enthusiastic about weather and climate impact research, applicants should have a strong quantitative background. For the first position a strong background in meteorology is an advantage and for the second position intermediate knowledge in statistics. Solid Python programming skills are required for both positions. The ability to work and communicate effectively across disciplines are desired. Applicants are expected to be fluent in English.

The expected starting date is 01.01.2022 and the positions (100% working contract, salary follows University of Bern regulations) are available for a duration of three years with the possibility to extend to a maximum of 3.5 years.

## Interested?

We look forward to receiving your application with the relevant documents (cover letter, CV, certificates, a link to your MSc thesis (draft or final version), two professional references). The application is open immediately until the position is filled. Please send one PDF containing all documents to [olivia.martius@giub.unibe.ch](mailto:olivia.martius@giub.unibe.ch).

Further information about the Climate Impacts group can be found on our website [https://www.geography.unibe.ch/research/climate\\_impact\\_research\\_group/index\\_eng.html](https://www.geography.unibe.ch/research/climate_impact_research_group/index_eng.html). For further information regarding the position, please contact Olivia Martius.

The University of Bern encourages an inclusive culture. Applications from qualified women are highly encouraged.