

Innsbruck, May 2021

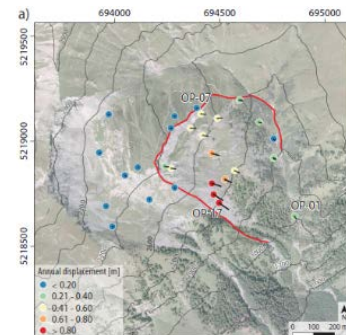
# Job Advertisement

## Scientific Assistant – PhD Position

within the  
doctoral programme „Natural Hazards in Mountain Regions“



Photo: J. Pfeiffer, 2017-06-26



Pfeiffer et al. 2018 (modified);  
doi: 10.3390/rs10111688

Within the mentioned doctoral programme of the research area „Mountain Regions“ of the University of Innsbruck a PhD-position is vacant. It is dedicated to the development of an automated workflow for integrating time series of earth observation variables and field observations with geotechnical process models identifying triggers and investigating the interlinked process cascades. As primary investigation site, the Reissenschuh DSGSD (Schmirn, Austria) will be considered. In the course of the PhD-thesis the following research topic and the underlying research concept of the doctoral programme is to be processed:

### Observation and Modeling of CAscade Processes at the Reissenschuh (Schmirn, Austria) - OMCAP

- Download of the research concept at:  
[https://www.uibk.ac.at/geotechnik/staff/schneider\\_muntau.html.en](https://www.uibk.ac.at/geotechnik/staff/schneider_muntau.html.en)
- Supervision by Priv.-Doz. Dr. Barbara Schneider-Muntau (Geotechnical Engineering), assoc.-Prof. Bernhard Gems (Hydraulic Engineering and Hydraulics), Prof. Margreth Keiler (Institute of Geography, Institute for Interdisciplinary Mountain Research), Priv.-Doz. Dr. Martin Rutzinger (Institute of Geography), and Dr. Thomas Zieher (Institute of Geography, Institute for Interdisciplinary Mountain Research)

**Research unit** Unit of Geotechnical Engineering, Institute for Infrastructure  
(Faculty of Engineering Sciences)

**Start / duration** 01.09.2021 – 31.08.2024 (3 years)

**Extent of employment** 30 hrs / week

## Main tasks

- Processing of the research concept from the doctoral programme "Natural Hazards in Mountain Regions"
- Research in the field of natural hazards process monitoring and modelling (including the fields of geotechnics, remote sensing, hydraulics and geography)
- Field work related to geotechnics, hydraulics, sediment transport, geology and 3D/4D remote sensing
- Numerical modelling of gravitational mass movements processes and run-out events
- Automated 3D close-range and remote sensing time series processing (e.g. photogrammetry, laser scanning and multi-spectral remote sensing)
- Independent teaching activities and contribution to teaching activities
- Administrative tasks (on request contribution to the organisational issues for the doctoral programme "Natural Hazards in Mountain Regions")
- Participation in university training and education activities (amongst others participation in the mentioned doctoral programme)

## Required qualification

- University degree of a master or diploma programme in civil engineering (or comparable academic degree, e.g. environmental engineering, geography)
- Resilient knowledge and experience in the fields of numerical modelling of gravitational natural hazard processes (e.g. with Abaqus, Plaxis, RocScience, ...)
- Knowledge on scripting languages (e.g. Matlab, Python, R, ...)
- Knowledge in automated earth observation data processing, information extraction and time series analysis
- Strong interest and basic knowledge in natural hazard processes and management, geotechnics, hydraulics, sediment transport, geological, geotechnical.
- Strong interest in 3D/4D remote sensing and geotechnical and hydraulics-related field work and according data analysis
- Very good English language skills
- Enthusiasm for independent work in an interdisciplinary research team
- Solution-oriented thinking
- Friendly and patient dealing with colleagues and students

## Are you interested?

Please apply for the present job advertisement with informative and meaningful documents via the career portal of the University of Innsbruck.

[https://fuonline.uibk.ac.at/public/karriereportal.details?asg\\_id\\_in=11980](https://fuonline.uibk.ac.at/public/karriereportal.details?asg_id_in=11980)

The University of Innsbruck strives for an increase of the proportion of women employees and explicitly invites competent women to apply for the present job advertisement. In the course of the action plan for the promotion of women at the University of Innsbruck, equally qualified women are preferably hired.

## Further information on scientific /organisational queries

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web [https://www.uibk.ac.at/geotechnik/staff/schneider\\_muntau.html.en](https://www.uibk.ac.at/geotechnik/staff/schneider_muntau.html.en)

**Deadline for applications**

**16.06.2021 – 06.07.2021**