



Innsbruck, November 2019

Job Advertisement (CHIFFRE: TW-10950)

Scientific Assistant – PhD Position

assigned to the

Doctoral Program „Natural Hazards in Mountain Regions“



Valley floor at Längenfeld, Ötztal, view from Gamskogel, 08/2008



Bathymetry survey of Blaue Lacke und Grünausee, Stubaital, 07/2017



Within the mentioned doctoral program (DP) of the research area „Mountain Regions“ at the University of Innsbruck (UIBK) a PhD-position is vacant. It is addressed to analyses of the stability of naturally formed dams and the related natural hazard processes. In the course of the PhD-thesis the following research topic and the underlying research concept of the DP is to be processed:

Requirements for the longevity of landslide dams in the Alpine region from a geotechnical and hydraulic perspective – Case-study-based data survey, modelling and hazard assessment

- Download of the **research concept** at the homepage of the DP:
<https://www.uibk.ac.at/alpinerraum/dps/dp-mountainhazards/>
- **Highly interdisciplinary focus** of the project and the PhD-thesis
- **Project team – thesis supervisors**
 - **Hydraulics, hydraulic engineering**
assoz.-Prof. *Bernhard Gems*
Univ.-Prof. *Markus Aufleger* (both UIBK)
 - **Geology**
Dr. Marc Ostermann (Geologische Bundesanstalt)
Univ.-Prof. *Michael Strasser* (UIBK)
 - **Geotechnics**
Dr. Barbara Schneider-Muntau
Univ.-Prof. *Robert Hofmann* (both UIBK)

Research unit	Unit of Hydraulic Engineering, Institute for Infrastructure (Faculty of Engineering Sciences)
Start / duration	13.01.2020 / 3 years
Extent of employment	30 hrs / week (75 %)



Main tasks

- Processing of the research concept from the doctoral program "Natural Hazards in Mountain Regions" (infrastructure project FSP ARMU Call 2019/20)
- Independent research in the fields of natural hazards process analysis (in the research foci geology, geotechnics, hydraulic engineering and hydrology)
- GIS-based catchment analyses, catchment-based water balance analysis
- Case-study based field surveys on the structure of naturally formed dams in the Alpine region, analyses of relevant dam parameters (if necessary also with geotechnical laboratory experiments)
- Lake bathymetry surveys with a multibeam sounder system, analysis / management of large data sets
- Numerical modelling on dam stability and dam failure processes, modelling of consequential fluvial natural hazard processes
- Potentially independent teaching activities, contribution to teaching activities (max. 2 semester periods per week / study year)
- Participation in university training and education activities (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. water management and environmental engineering), specialization in geotechnics and hydraulic engineering
- Resilient knowledge and experience in the fields of numerical modelling of fluvial and gravitational natural hazard processes and dam failure mechanisms
- Strong interest and basic knowledge in natural hazard processes and management, geology, geotechnics und hydraulic engineering
- Strong interest and motivation to perform interdisciplinary field surveys in the Alpine terrain
- Very good English language skills
- Collaborative skills
- Enthusiasm for independent work in an interdisciplinary research team
- Friendly and patient dealing with colleagues and students

Payment

- € 2.148,40 (14 times; B1/1 according collective agreement)
- Crediting of relevant previous employments to a maximum extent of 3 years

Job application

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

https://ifuonline.uibk.ac.at/public/karriereportal.details?asg_id_in=10950

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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We look forward to your job application until 11.12.2019!