



Job Announcement

Young, modern, and research-oriented... the University of Potsdam has firmly established itself within the scientific landscape since its founding in 1991. Nationally and internationally renowned scientists teach and perform research here at Brandenburg's largest university. The University of Potsdam is successful in acquiring third-party funds, delivers outstanding performance in technology and knowledge transfer, and has a very service-oriented administration. With about 22,000 students studying at three campuses – Am Neuen Palais, Griebnitzsee and Golm – the University of Potsdam is a prominent economic factor and engine of development for the region. The University of Potsdam has a total of over 3,000 faculty and staff members and is located in one of Germany's most scenic areas.

The **University of Potsdam, Faculty of Science, Institute of Geosciences**, invites applications for the following position within the group of General Geology:

Academic Staff Member Requisition No.: 412/2021

The position is available from March 01, 2022. The salary is determined by the collective bargaining agreement for public employees in Germany (TV-L 13 Ost). The position is for 30 hours per week (75% of a full-time contract) and funded by the European Research Council, project "COOLER" (Climatic Controls on Erosion Rates and Relief of Mountains Belts). This is a temporary position limited to a term of 3.5 years in accordance with Section 2 subsection 1 of Fixed-Term Employment Contracts in Science and Research Act (WissZeitVG).

Context: This PhD position offers an attractive research environment and strong potential concerning networking, integration into the scientific community, supervision, and cooperation with other PhD fellows and postdocs of the research unit. The successful candidate will be part of the ERC Project "COOLER" (Climatic Controls on Erosion Rates and Relief of Mountains Belts). The main aim of the COOLER project is to advance our understanding of the couplings between tectonic and climatic processes through the development of novel tools and numerical models that record erosion rates and relief changes with unprecedented resolution and link these to potential driving mechanisms. More information on the project can be found here: <http://erc-cooler.eu>.

Responsibilities: Within the overall project, your research project will address the question of how tectonic uplift rate affects glacial relief development. Conceptually, tectonic uplift would have a dual role in promoting or suppressing glacial relief development: in the absence of tectonic uplift, glacial relief is limited by the elevation of any pre-existing topography, augmented by the isostatic response to glacial incision. In contrast, for very high (several km/Myr) uplift and erosion rates, the imprint of glacial erosion on the landscape is limited by rapid erosional destruction of glacially carved topography.

To address this question, we will study the timing and pattern of glacial valley incision in the European Alps and Pyrenees. The Alps are particularly suited for this comparison as they show a clear west-east gradient in long-term exhumation rates from AFT/AHe thermochronology. We will sample granite and gneiss massifs in the central and eastern Alps to characterize glacial incision and compare this to previous work in the western Alps. $^4\text{He}/^3\text{He}$ -elevation transects will allow quantifying the amount, timing and rate of glacial incision. The project will be extended to the Pyrenees, which have a similar climatic setting to the Alps but show essentially no present-day uplift. Nevertheless, they show deep glacial valleys and steep relief, posing the question how much of this relief is original or glacially modified.

A final project will address the feedbacks and coupling between glacial erosion and tectonics: does focused glacial erosion affect tectonic patterns? We will focus on the glaciated extensional gneiss dome of the Cordillera Blanca (Peru), which shows extensive glaciation and rapid

exhumation with indications of a recent increase in exhumation rates. In all locations, we will collect $^4\text{He}/^3\text{He}$ data and combine these with both the coupled landscape evolution – thermo-kinematic model and, potentially, thermo-mechanical models coupled to surface-process models.

Qualifications:

- MSc in Earth Sciences or a closely related field
- Preferably some experience in thermochronology, in numerical analysis, and/or in field work in remote areas.
- good oral and written communication skills in English
- good interpersonal skills, and are comfortable working in a team.

We offer you varied and challenging tasks in a dynamic team as well as attractive working conditions. Find out more about the wide range of offers and benefits for our employees on the internet at <https://www.uni-potsdam.de/de/arbeiten-an-der-up/>. For further insights into the University of Potsdam, please visit our homepage at <https://www.uni-potsdam.de/en/>. Prof. van der Beek will be happy to provide you with further information regarding the job advertisement via e-mail vanderbeek@uni-potsdam.de.

Under the laws of the federal state of Brandenburg, employees under this contract are permitted to dedicate at least 33% of their contract time to their own academic qualification.

The University of Potsdam aims to increase the proportion of women in research and teaching and therefore invites qualified female applicants to apply. The University of Potsdam values the diversity of its members and pursues the goals of equal opportunities regardless of gender, nationality, ethnic and social origin, religion/belief, disability, age, sexual orientation or identity. In the case of equal suitability, women within the meaning of Section 7 (4) BbgHG (Brandenburg Higher Education Act) and people with severe disabilities will be given preferential consideration. Applications from abroad and from persons with a migration background are expressly welcome.

Applicants should send their application materials (including the following components: CV, names of two referees, letter of motivation, a record of academic degrees including a transcript of records) by January 31 2022 at the latest, via email to Prof. Dr. Peter van der Beek (vanderbeek@uni-potsdam.de) with the subject line, “Job Title – requisition number: 412/2021.”

Potsdam, 20.12.2021