10 Doctoral positions offered by International Research Training Group

The Sino-German Research Training Group (GRK 2309) “Geo-ecosystems in transition on the Tibetan Plateau” (TransTiP), funded by Deutsche Forschungsgemeinschaft (DFG), offers a research-oriented doctoral program analyzing different aspects of Earth surface fluxes on the Tibetan Plateau in four distinct project areas: Sediment fluxes, carbon fluxes, water fluxes and water quality, as well as human dimensions of climate change.

For the start as of January 1st 2021, TransTiP is now offering 10 PhD positions (3 years, 50-100%)

Research Area **Sediment Fluxes**

- Geophysical methods to constrain sediment and water transport models at Alpine Catchments
- Estimation of soil moisture using advanced remote sensing methods

Research Area **Carbon Fluxes**

- Assessing land-atmosphere heat and CO2 exchange with Eddy covariance
- Resilience of grassland ecosystem services to abiotic stress depending on biodiversity: soil structure and carbon cycling
- Soil warming and timescales of carbon cycling in high elevation peatlands

Research Area **Water Fluxes and Water Quality**

- Modelling data-driven impact of atmospheric and hydrogeophysical variables on water fluxes
- The deep biosphere in lake sediments: distinguishing deeply buried microbial life and fossil records
- Understanding nitrification in high-altitude lakes
- Population dynamics in freshwater ecosystems under climate change – A combined ecological-molecular approach
- Lipid biomarkers and compound-specific isotope analyses – calibration and 2k

Research Area **Human Dimensions of Climate Change**

- Human-environment relations through time – an anthropological approach
- Historical changes in the regional flora related to increasing grazing pressures as based on sedimentary ancient DNA
The Tibetan Plateau represents one of the most vulnerable geo-ecosystems on Earth, being affected by accelerated climate warming and rapid intensification in land use. Therefore, the goals of TransTiP are to (a) quantify rates and magnitudes of sediment movement and transport, (b) identify the impact of land-use change on soil organic carbon storage and associated carbon fluxes, (c) determine how these processes have affected water balances, geo-ecosystem services, and biodiversity patterns, and (d) address the social context of climate change.

The individual thesis topics and corresponding specific requirements are described at https://www.tu-braunschweig.de/irtg-transtip/vacancies. TransTiP is jointly run by Technische Universität Braunschweig, Leibniz Universität Hannover, and Friedrich Schiller Universität Jena, in cooperation with Max-Planck-Institute for Biogeochemistry, Jena, Geoforschungszentrum Potsdam, Leibniz Institute DSMZ Braunschweig, and Institute of Tibetan Plateau Research, Chinese Academy of Sciences, Beijing, China.

We are seeking highly motivated and qualified early career researchers holding a M.Sc. or equivalent degree with a suitable background in geophysical sciences, environmental sciences, biological sciences, or related fields. Applicants must have excellent communication skills in English, both written and oral, and should have strong affection to acquire interdisciplinary work and research as well as intercultural experiences.

The program includes a 6-months research stay at our partner institutions in China and provides excellent scientific and transferable skills training at all participating institutions. We offer exciting modern research projects in well-equipped laboratories using state-of-the-art technologies, a communicative atmosphere within an excellent scientific network, mutual exchange with a broad range of institutions and participation in international and national conferences and workshops.

Start of the program: January 1st 2021
Application deadline: May 31st 2020

Please submit your application (in English), consisting of one pdf-document, via email to transtip(at)tu-braunschweig.de. Instructions can be found here: How to apply. Interviews with shortlisted candidates are planned for the period between June 29th and July 3rd, 2020, in Braunschweig during our Candidate Colloquium.

For any further information concerning the positions, individual projects, as well as requirements and application process refer to our website or contact the TransTiP Scientific Coordinator: Dr. Nicole Börner (transtip(at)tu-braunschweig.de)