PhD Position Competition at the Department of Geomorphology and Quaternary Geology, University of Gdańsk, within the SONATA BIS project

A multiple in–situ cosmogenic nuclides approach to dating erratics within the southern fringe of the Scandinavian Ice Sheet (DatErr 2.0)

The Department of Geomorphology and Quaternary Geology at the University of Gdańsk is looking for a motivated person for a PhD position within the National Science Centre SONATA BIS project.

Project: In the project "DatErr 2.0," we aim to use large glacial erratic boulders to reconstruct the chronology and dynamics of the retreat of the palaeo–ice sheet in Poland and Germany. The scientific goal of the project is to reconstruct the history of exposure of glacial erratics in the southern fringe of the Scandinavian Ice Sheet and to reconstruct the chronology and dynamics of ice sheet retreat in this region during the Saalian glaciation (MIS 6 or 8) and after the Last Glacial Maximum (LGM). The research involves determining the exposure time of large erratics deposited in the marginal part of the extensive ice sheet using several terrestrial cosmogenic isotopes produced in quartz (^{26}Al, ^{10}Be, and ^{14}C). The project will be carried out over five years and involves collaboration with external partners from the *European Centre for Research and Teaching of Environmental Geosciences (CEREGE)* in France and the *Cosmic Ray Isotope Sciences at Dalhousie (CRISDal) Laboratory and André E. Lalonde AMS Laboratory* in Canada.

PhD Thesis: The PhD candidate will be responsible for the analysis of glacial erratics located in the area of the Saalian glaciation, as well as the collection and preparation of samples for cosmogenic nuclides ^{26}Al and ^{10}Be analysis. Additionally, the research will involve statistical analysis of geochronological data and analysis of landforms and their geomorphological interpretation. The research will be conducted in close collaboration with Dr. Vincent Rinterknecht (CEREGE, France) and Dr. Andreas Börner (Geological Survey of Mecklenburg–Vorpommern, Germany). The expected outcome of the PhD work is a series of scientific papers on the chronology and dynamics of the southern edge of the Scandinavian Ice Sheet during the Saalian glaciation.

Location and Duration: The work will be carried out from 2023 to 2027 at the Geomorphological Reconstructions Laboratory, Department of Geomorphology and Quaternary Geology (Faculty of Oceanography and Geography, University of Gdańsk). In addition to the research work, the PhD candidate will also participate in the Doctoral School of Natural and Exact Sciences at the University of Gdańsk. Candidates should be ready to start working from October 2023.

Funding: All costs related to field and laboratory work will be covered within the project. The PhD candidate will also receive a monthly scholarship of 3,000 PLN for the first two years of study, and after a midterm evaluation, 4,000 PLN per month for the following two years. Additionally, funding for a three–month scientific internship abroad will be provided, which the PhD candidate will be obliged to undertake.

Requirements for Candidates:

• Master's degree in physical geography, geology, or related disciplines;

• enthusiasm for conducting research work and ability to work in a team;

• full–time availability (100% employment);

• ability to speak and write in English.

Contact: The project is led by **Dr. Karol Tylmann** from the Geomorphological Reconstructions Laboratory, Department of Geomorphology and Quaternary Geology. Candidates are requested to send their CV, motivation letter, references from the supervisor of their master's thesis or immediate superior, and consent to the processing of personal data to the following email address: k.tylmann@ug.edu.pl. The final deadline for submissions is July 10th at 3:00 pm, and the competition results will be announced by July 12th, 2023. Any questions regarding both the scientific scope of the project and the organizational–financial aspects can be directed to the same email address (k.tylmann@ug.edu.pl).

University of Gdańsk

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