UNIVERSITY OF COLOGNE


Foto: Gregor Hübl

Faculty of Mathematics and Natural Sciences

PhD position (f/m/x) in paleoecology of Antarctic lakes

Institute of Geology and Mineralogy | Geobiology

We are one of the largest and oldest universities in Europe and one of the most important employers in our region. Our broad range of subjects, the dynamic development of our main research areas and our central location in Cologne make us attractive for students and researchers from around the world. We offer a wide range of career opportunities in science, technology, and administration.

The position is funded by the DFG under the Priority Programme SPP 1158 Antarctic Research. Within the framework of the project, you will investigate the palaeoecological evolution of lakes in East Antarctica. The focus is on how microbial communities in Antarctic lakes have evolved during the Holocene in response to changes in the environment and climate. You will study sediment deposits from various lakes and reconstruct their environmental and ecosystem evolution over time. A key focus of your work is the comprehensive analysis of lipid biomarkers and their interpretation within the context of the palaeoecology of the lakes. In addition, further parameters derived from micro- and macro-palaeontological, sedimentological and isotopic geochemical observations are recorded and incorporated into the interpretation.

YOUR TASKS

- The planning, implementation, and evaluation of laboratory and analytical work on Antarctic sediment samples using GC-MS and HPLC-UV-Vis spectrophotometry, EA-IRMS, and microscopic techniques
- The integration of findings from these geochemical, isotopic and sedimentological investigations to gain a better understanding of limnic systems with regard to the interaction between the environment and ecology
- The presentation of results at national and international conferences and the publication of research findings in international specialist journals
- Collaboration within an interdisciplinary and international research environment

YOUR PROFILE

- You hold a postgraduate degree (M.Sc. or equivalent) in a subject area relevant to the project, such as earth sciences, environmental sciences or a related discipline.
- You have a sound background in at least one area relevant to the project and are keen to familiarise yourself with further methods and research questions. Experience in organic geochemistry, biomarker analysis (e.g. GC-MS, HPLC-MS), microscopy and sedimentology is particularly welcome.

In addition, we expect:

- Motivation to work in an interdisciplinary and international research environment
- A willingness and interest in collaborating with researchers both within and outside the project and in establishing new scientific partnerships
- Good communication and teamwork skills
- Excellent written and spoken English

WE OFFER

- Working in an internationally well-established research group with the opportunity to obtain a Ph.D. degree
- A diverse working environment with equal opportunities
- Support in balancing work and family life
- Extensive advanced training opportunities, e.g. within the GSGS graduate school of the department of Geosciences
- Occupational health management offers
- Flexible working time models

The University of Cologne promotes equal opportunities and diversity. Women will be considered preferentially in accordance with the Equal Opportunities Act of North Rhine-Westphalia (Landesgleichstellungsgesetz – LGG NRW). We also expressly welcome applications from all suitable candidates regardless of their gender, nationality, ethnic and social origin, religion, disability, age, sexual orientation and identity.

The position is available from 1 January 2027 on a part-time basis (29,87 hours per week). The position is to be filled for a fixed term for 3 years. If the applicant meets the relevant wage requirements and personal qualifications, the salary is based on remuneration group 13 TV-L of the pay scale for the German public sector.

Please apply online with proof of the required qualifications without a photo under: https://jobportal.uni-koeln.de.
The reference number is Wiss2611-09. The application deadline is 15 December 2026.

For further inquiries, please contact Dr Sonja Berg (sonja.berg@uni-koeln.de) or Professor Dr Christine Heim (christine.heim@uni-koeln.de) and take a look at our FAQs.

HR EXCELLENCE IN RESEARCH