Faculty of Mathematics and Natural Sciences

PhD graduate research student (f/m/d)

CRC 1211 | Project A03 | Atmospheric sciences

The University of Cologne is one of the largest and most research-intensive universities in Germany, offering a wide range of subjects. With its six faculties and its interfaculty centres, it offers a broad spectrum of scientific disciplines and internationally outstanding profile areas, supported by the administration with its services.

We offer a position for obtaining a PhD degree in the atmospheric sciences as integral part of the collaborative research center "Earth - Evolution at the dry limit" (https://sfb1211.uni-koeln.de/), funded by the German Science Foundation. Now in its second phase, CRC 1211 wants to deepen our understanding of the mutual evolutionary relationships between Earth surface processes and biota in (hyper-)arid desert systems, where both are severely limited by water availability. The successful candidate will be a member of the CRC's Integrated Research Training Group, which aims at educating a generation of truly interdisciplinary doctoral candidates in the fields of Earth and Life Sciences, a combination of growing importance in the course of ongoing and accelerated global change. The here advertised position addresses the climate-model diversity in the Atacama Desert on geological time scales and the implication for aeolian transport, supervised by the project leader Prof. Stephanie Fiedler.

YOUR TASKS
» Study meteorological processes important for desert-dust emission and transport
» Join expeditions to the Atacama Desert and carry out measurements of desert-dust emission
» Perform and analyze atmospheric model experiments on high-performance computers
» Program analyses of big data sets like those from the coupled model intercomparison project (CMIP) and observations
» Develop scientific skills including independent critical thinking, writing journal articles, and defending scientific results

YOUR PROFILE
» Master of Science or equivalent university degree in meteorology, geophysics, physics, informatics, or a related field at the time of appointment
» Very good written and oral English skills
» Good meteorological knowledge, ideally with focus on atmospheric dynamics, aerosols and/or climate
» Knowledge and experience in writing computer programs (e.g., python, shell scripts, climate data operators, and/ or FORTRAN90/95) for the statistical analysis of big data sets in different formats (e.g., netCDF, ASCII) and for the graphical display of the results using a Linux/UNIX computer system

» Ability to learn running and assessing complex model simulations on high-performance computers
» Willingness to participate in desert expeditions and interest in interdisciplinary research, i.e., linking results of physical processes to other projects in CRC 1211
» Ability for critical and creative thinking

WE OFFER YOU
» Association with the graduate school of geosciences with a structured PhD program (https://geosciences.uni-koeln.de/gsgs)
» a young, scientifically active research group
» a diverse and fair working environment
» support in reconciling work and family life
» flexible working time models
» extensive advanced training opportunities
» occupational health management offers
» local transport ticket at a discount for UoC employees

The position is available from 1 January 2021 (75% / 29,87 hours per week). It is limited for three 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.

The University of Cologne is committed to equal opportunities and diversity. Women are especially encouraged to apply and will be considered preferentially in accordance with the Equal Opportunities Act of North Rhine-Westphalia (Landesgleichstellungsgesetz – LGG NRW). We also expressly welcome applications from people with disabilities / special needs or of equal status.

Please apply online at: https://jobportal.uni-koeln.de with proof of the sought qualification (a motivation letter, a CV with a list of early achievements, copies of your undergraduate degree certificates, contact details of two referees who can assess your skills). The reference number is Wiss2007-22. The application deadline is 1 October 2020.

University of Cologne