

The **Institute for Geophysics and Meteorology** at the University of Cologne (IGMK) invites applications for a Research Assistant position with the opportunity for graduation

## PhD position

Investigating moisture transport and fog formation in Chile using satellite observations

starting 1 January 2017 with a weekly working time of 29,87 hours (75% position) The initial contract will be awarded for at least 3 years. The salary is based on the German E13 TV-L scale if terms and conditions under collective bargaining law are fulfilled.

The position is related to the Collaborative Research Center SFB1211 (<http://sfb1211.uni-koeln.de/>) "Earth - Evolution at the dry limit" which was recently approved by the German Research Foundation for an initial four-year period. Within this interdisciplinary project the evolution of life in extremely water limited environments will be studied by an enthusiastic team of atmospheric scientists, biologists, ecologists, geologists, soil scientists and more. The studies are centred around the Atacama Desert and willingness to travel to Chile is required.

The subproject A01 aims at the characterization of the local climate in northern Chile with focus on atmospheric water supply necessary for life and Earth surface processes. While close to the coast fog events dominate, land inward, a significant part of the moisture supply for vegetation and fauna is carried out via the vapor phase. Within this PhD project, observations by different satellite instruments will be exploited to investigate the processes leading to low-cloud and fog occurring over the transition region between Eastern Pacific and the Chilean high altitude desert region. Together with a small team of atmospheric scientists, field experiments in Chile will be planned and carried out in order to provide reference data of low-level clouds and water vapor on the local scale. Long-term microwave satellite data together with atmospheric reanalysis will be used to describe the spatiotemporal availability of water vapor for different types of climatic variability, such as the Pacific Decadal Oscillation. The aim is to link the local availability of atmospheric water (i.e. water vapor and fog) to larger scale proxies (i.e. synoptic weather pattern, multi-decadal forcing) in order to establish downscaling rules for past and future climate. Please contact Dr. Mario Mech ([mario.mech\[at\]uni-koeln.de](mailto:mario.mech[at]uni-koeln.de)) or Prof. Susanne Crewell ([crewell\[at\]meteo.uni-koeln.de](mailto:crewell[at]meteo.uni-koeln.de)) for further information.

### Requirements

We expect a strong interest in atmospheric sciences with specialization in climate diagnostics, water cycle studies and/or remote sensing. Applicants should have a Master-of-Science-equivalent university degree in meteorology, geophysics, physics or mathematics. Experience in scientific programming, preferably in a UNIX/LINUX environment, and knowledge in computational modelling is highly desirable. Candidates must possess excellent communication skills both in written and spoken English.

## Applications

Interested candidates should send a CV; a cover letter describing background, training and research interests, certificates, and the contact information of two referees as a single PDF to [meteo-jobs\[at\]uni-koeln.de](mailto:meteo-jobs[at]uni-koeln.de). Review of applications will begin immediately and continue until the positions have been filled, **December 06, 2016** latest.

## Selection

The selection for the position will be based solely on merit without regard to gender, religion, national origin, political affiliation, marital or family status or other differences. Among equally qualified candidates, handicapped candidates will be given preference.

The University of Cologne is an equal opportunities employer. Applications of women are thus especially encouraged; applications of disabled persons will be given preferential treatment to those of other candidates with equal qualifications.