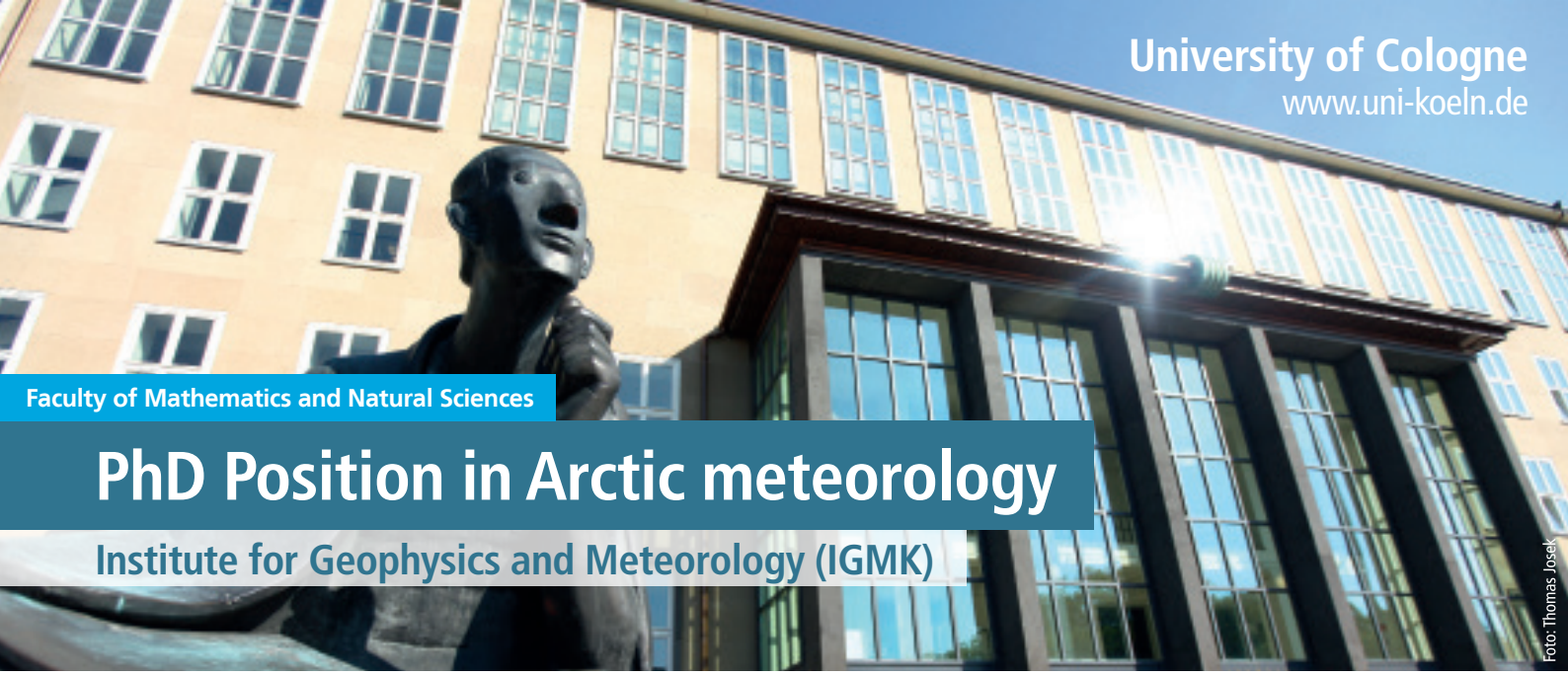

Faculty of Mathematics and Natural Sciences

PhD Position in Arctic meteorology

Institute for Geophysics and Meteorology (IGMK)

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.

The position is funded within the Collaborative Research Center TR172 Arctic Amplification (AC)3 (www.ac3-tr.de), which currently enters its second phase (January 2020). Within the TR172, this project investigates which processes control the evolution of cloudy Arctic mixed-layers as embedded in intrusions of warm and moist air into the high Arctic. High-resolution simulations will be combined with long-term meteorological measurements made during the ongoing international MOSAiC field-campaign (mosaic-expedition.org). More information about the project is provided online geomet.uni-koeln.de/stellenangebote.html

YOUR TASKS

» Configuration and generation of a library of high-resolution large-eddy simulations of Arctic clouds and turbulence
» Evaluation of the model results against relevant MOSAiC measurements
» Statistical interpretation of big data to identify controls on Arctic mixed-layer evolution
» Testing hypotheses concerning the formation and maintenance of capping humidity layers above the thermal inversion as observed during MOSAiC
» Scientific publication and communication of obtained results

YOUR PROFILE

» Master's Degree in Meteorology, Mathematics, Physics or related field
» A strong interest in high-resolution numerical simulation of geophysical flows, boundary-layer meteorology, Arctic clouds and climate, and conceptual modeling
» Experience in scientific programming (Fortran, C++, Python) on UNIX/LINUX systems, preferably also on supercomputers
» An investigative mindset, highly motivated to gain scientific insight into an ongoing major shift in Earth's climate (Arctic Amplification)
» Excellent communication skills in written and spoken English, as well as a proven ability to work both independently and as part of a team

WE OFFER YOU

» an exciting research project, interaction with scientists both nationally and internationally, the opportunity to obtain a PhD degree
» 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 March 2020 on a part -time basis (65% / 25,89 hours per week). It is limited to a term of 3 years (possible extension by up to 10 months). 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 expressly encouraged to apply and given priority in accordance with the Equal Opportunities Act of North Rhine-Westphalia (Landesgleichstellungsgesetz – LGG NRW). We also expressly welcome applications from people with special needs or of equal status.

Please send your convincing application including a motivation letter describing background, training, research interests, and motivation for this position; your CV, certificates and the contact information of two referees all merged into a single PDF via email with the reference number Wiss2001-14 to Prof. Dr. Roel Neggers (neggers@meteo.uni-koeln.de).

The application deadline is 15 February 2020.

University of Cologne