

The Institute for Geosciences and Meteorology at the University of Bonn invites applications for a fixed-term 4-year position in the Hans-Ertel-Centre for Weather Research (HErZ) research area “Climate Monitoring and Diagnostics” as a

Research Scientist (PostDoc, 100% E13 TV-L)

Background:

Within the upcoming 4-year funding period of the Hans-Ertel-Centre starting in 2019, the possibility of an ultra-high resolution reanalysis will be explored in order to increase the quality of the representation of micro-climate in regional reanalysis data sets. Therefore, an experimental ensemble reanalysis system at ultra-high-resolution (<1km) will be implemented by utilizing the new limited area ensemble NWP system (ICON-KENDA) of the German Meteorological Service (DWD). Within the scope of the project, two applications of such an innovative data set will be investigated, namely urban climate and renewable energy. The successful candidate will develop and test the new ultra-high resolution reanalysis system under the supervision of Dr. Jan Keller and Prof. Andreas Hense.

The position is based at the Meteorological Institute of the University of Bonn (Germany) within the Climate Monitoring and Diagnostics group of the Hans-Ertel-Centre for Weather Research - a joint research group of the University of Bonn and University of Cologne. The successful candidate will closely cooperate with other group members in Bonn and Cologne as well as colleagues in the German Meteorological Service departments “Research and Development” and “Climate and Environment” at DWD’s headquarter in Offenbach.

Responsibilities:

- Implement the system on ECMWF’s high-performance computing facilities.
- Setup and conduct experiments and evaluate the system’s performance to identify its potential benefit for climate monitoring purposes.
- Investigate the impact of land-surface heterogeneity and land-use change on the local micro-climate especially with respect to extremes and urban climate.
- Collaborate closely with other members of the “Climate Monitoring and Diagnostics” group in Bonn and Cologne especially regarding the aspect of renewable energy.
- Present research results at scientific conferences or workshops and in scientific journals

Required Qualifications:

- PhD / Doctorate in Meteorology, Climate Physics or another relevant field
- Demonstrated skills in working with limited area weather forecasting or climate prediction models (e.g., COSMO, WRF)

- Experience in at least two of the following areas of expertise with a publication record in peer-reviewed, international journals (experience in more areas is considered a plus):
 - Implementation of NWP or reanalysis systems
 - Ensemble data assimilation
 - Interaction of land surface and atmosphere especially with respect to urban climate or renewable energy
 - Evaluation / analysis of climate and / or reanalysis data sets
 - Climate change detection and attribution
- Working experience with shell scripting and programming languages (Fortran is considered a plus)
- Working experience with data analysis software (e.g. R, Python)
- Proficiency in English (German is considered a plus)

Further information:

The position will start as soon as possible with a fixed end date corresponding to the end of the funding period at 31 December 2022. Salary is according to German public sector salary grade TV-L West E13 (100%) including comprehensive health care and social security benefits. The University of Bonn is committed to diversity and equal opportunity and is certified as a family-friendly university. It aims to increase the proportion of women in areas where women are under-represented and to promote their careers in particular. It therefore urges women with relevant qualifications to apply. Applications will be handled in accordance with the State Equality Act (Landesgleichstellungsgesetz). Applications from suitable individuals with a certified serious disability and those of equal status are particularly welcome.

Application:

To apply for this position, please send a letter of application, CV, and the names and contact information of two references by email as PDF attachment to herz-application@uni-bonn.de by 5 December 2018 latest for full consideration. For further information or in case any questions arise, please feel free to contact Dr. Jan Keller (jkeller@uni-bonn.de).