METEOROLOGISCHES INSTITUT
DER RHEINISCHEN
FRIEDRICH-WILHELMS-UNIVERSITÄT BONN

Pending approval of external funding, the Meteorological Institute of the University of Bonn invites applications for a

Position as PhD student or Research Associate (75% or 100% E13 TV-L)

within the proposed DFG research unit 2589 „Near-Realtime Quantitative Precipitation Estimation and Prediction“ (RealPEP).
RealPEP thrives to achieve significant improvements at all stages along the process chain from Quantitative Precipitation Estimation (QPE), Precipitation Nowcasting (QPN), numerical prediction of quantitative precipitation (QPF) and predicting discharge and potential flash floods in small- to meso-scale catchments (FFP). RealPEP will rely on a multi-sensor data exploitation platform to monitor the precipitation generating atmosphere and tackle urgent science questions to better identify mechanisms that determine the onset, location, intensity, and development of precipitating systems. Developments will be implemented for near-realtime processing in order to be able to mitigate risks to society and ecosystems.

The successful candidate will improve and extend advection-based nowcasting by including lifecycle effects in radar algorithms. Two strategies are foreseen: In a first step, trends in rainfall intensity, size and shape of the precipitating cells observed during previous time steps will be extrapolated in time. In a second step polarimetric radar signatures indicative for potential changes in precipitation generation (e.g. columns of enhanced differential reflectivity, so-called Z_{DR}-columns) will be exploited for refinements of the approach.

The position is based at the Meteorological Institute of Bonn University, Auf dem Hügel 20, Germany, an internationally known facility for radar research operating in cooperation with Forschungszentrum Jülich GmbH two research polarimetric X-band weather radars.
The position can be filled with a PhD student or a Postdoc, the decision will be made based on the applications.

Requirements

We welcome applicants preferably with a Masters degree or PhD in meteorology or physics and a strong background in radar polarimetry and/or cloud microphysics. Proficient English language skills in oral and written communication are required. It is expected that the candidate closely cooperates with other scientists in the research unit including also colleagues at the German national weather service (Deutscher Wetterdienst, DWD), Forschungszentrum Jülich GmbH, Free University Berlin, and KIT Campus Alpine in Garmisch-Partenkirchen. The position will be offered for 3 years starting in January 2019.

Applications

Interested candidates should send a CV, a cover letter describing motivation, background, training and research interests, certificates, and the contact information of two persons, which can be asked for references, as a single PDF of less than 5MB to silke.troemel@uni-bonn.de. The deadline for all applications in RealPEP is **15 September 2018**.

Selection

The selection for the positions 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.