

The **cloud physics group** at the Karlsruhe Institute of Technology, Institute for Meteorology and Climate Research - Troposphere Research (IMK-TRO, <http://www.imk-tro.kit.edu/>), has an opening for a **Postdoctoral Researcher** to work on

### **Simulation of aerosol distributions, cloud condensation and ice nuclei in Northwestern Europe as input to the HD(CP)<sup>2</sup> simulations**

This project is embedded in the BMBF funded German-wide research initiative HD(CP)<sup>2</sup> (High Definition Clouds and Precipitation for Climate Prediction, <http://hdcp2.zmaw.de/>) and will be conducted in close collaboration with Prof. Dr. Ina Tegen at TROPOS in Leipzig, Germany. The goal of the proposed project at KIT is to select, develop and apply suitable parameterizations of cloud-relevant aerosol properties to aerosol fields provided by TROPOS in order to allow realistic, spatially and temporally variable simulations of aerosol-cloud interactions in high resolution simulations with the ICON model in future. Sensitivity experiments and model evaluation for selected cases will be part of this project.

We are looking for a highly motivated, independent researcher. We offer a dynamic work environment at one of Germany's foremost research institutions for natural science and technology (read more at <http://www.kit.edu>) with payment according to the Collective Agreement for the Public Service Sector (TV-L E13). The position is initially offered for 18 months with a possible extension subject to performance and funding availability. The preferred starting date is October 1, 2013, but other options can be negotiated. The Karlsruhe Institute of Technology seeks to increase the number of female scientists and encourages them to apply. Handicapped persons with comparable qualifications receive preferential status.

#### **Tasks:**

- Choose, develop and adapt suitable CCN and IN parameterizations for the planned model setup (LES resolution, taking into account aerosol composition)
- Calculate spatially and temporally varying CCN and IN distributions for selected time periods and evaluate them with observations
- Sensitivity experiments with either the COSMO or the ICON model to quantify the impact of the variable aerosol concentrations on the simulated clouds
- Collaborate with the project partners at TROPOS and within HD(CP)<sup>2</sup>
- Presentation of results at international conferences and workshops
- Publication in peer-reviewed journals

#### **Qualifications:**

- Doctorate in meteorology, physics or a related subject
- Good programming skills (Fortran, Unix/linux shell scripts, visualization software)
- Experience in numerical modeling
- Fluency in oral and written English
- Background in aerosol-cloud interactions, cloud microphysics and/or aerosol science

Please submit your application as one pdf file, in English or German, including a cover letter, preferred starting date, curriculum vitae, list of publications, and contact details of two referees to **Prof. Dr. Corinna Hoose**, [corinna.hoose@kit.edu](mailto:corinna.hoose@kit.edu). Review of applications will start on June 15 and will continue until the position is filled.