

University of Augsburg

The **Faculty of Applied Computer Science** of the **University of Augsburg, Institute of Geography, Chair for Regional Climate and Hydrology (Prof. Dr. Harald Kunstmann)** is offering a

PostDoc position in the field of rainfall observation using commercial microwave link networks in Burkina Faso

for the **duration of three years** starting at **earliest convenience**.

The scientist will participate in a research project entitled “*Improving RAINfall Information and RAINwater Usage for adapted Agricultural Production under high Climate Variability in Burkina Faso*” (**AgRAIN**), which is funded via the “CLIENT II” program of the German Federal Ministry for Education and Research (BMBF). One core element of AgRAIN is the usage data from commercial microwave link (CML) networks to derive rainfall information in Burkina Faso. These CML networks provide the interconnections between cell phone towers on a country-wide basis. Hence, using them as rainfall sensors will significantly increase the spatial coverage with sensors in an otherwise data scarce region. The work will be based on a successful initial pilot study with a small number of CMLs which is carried out in cooperation with the associated project partners.

The major objectives for the position are:

1. The extension of the CML data acquisition system in Burkina Faso
2. The installation of rain gauges at dedicated field sites in Burkina Faso as reference to validate new CML processing techniques
3. The initialization of real-time CML data transfer and the optimization of real-time processing methods for the derivation of rainfall rates from CML data
4. The derivation of spatial rainfall information via the combination of CMLs and satellite observations
5. The participation in conferences as well as the organization and support of seminars and workshops.

To be successful the potential candidate should have:

- A PhD degree in environmental- or natural sciences (meteorology, hydrology, geography, physics, remote sensing etc.)
- Good knowledge of UNIX/Linux systems
- Good programming skills, preferably in Python
- Basic knowledge of, or willingness to learn, best-practices for scientific programming (version control, reproducibility, open-sourcing code)
- Willingness to spend several weeks a year in Burkina Faso
- Good communication skills in English and French

This position can be varied as part-time employment, provided that job sharing ensures the full-time performance of the tasks. The salary is based on personal and collectively agreed conditions according to *Entgeltgruppe 13 TV-L*.

The University of Augsburg promotes the professional equality of women. Female candidates are explicitly invited to submit their application. The University of Augsburg stands up for compatibility of family and professional life. For more information, please contact the woman’s representative office. Severely disabled applicants are given preferential consideration in the event of equal qualification.

Please send your detailed application electronically and in one pdf-file to harald.kunstmann@geo.uni-augsburg.de **until 15th December 2019** latest (CV with proof of required skills, focused letter of motivation, contact details of 2-3 referees).

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and to Verena Wedler (verena.wedler@kit.edu)