



**Urban Water Interfaces  
(UWI)**



Technische Universität Berlin offers an open position within the DFG Research Training Group "Urban Water Interfaces (UWI)"

**Research Assistant** - 0.75 working time - salary grade E 13

**Reference number:** VI-821/20 (starting at 01/07/21 / until 30/06/2024 / closing date 01/03/21)

## **W6: Modelling impacts of urban green infrastructure on urban cooling based on remote-sensing**

Evapotranspiration (ET) is a crucial component of urban greening initiatives of cities worldwide aimed at mitigating urban heat island effect. However, ET estimation methods in urban areas have so far been limited. The research will focus on heat and vapor fluxes at the soil-vegetation-atmosphere interface. The main objective is to model and to understand the spatial and temporal patterns of ET in urban areas on different scales. Observations will be obtained using drone and satellite based remote sensing, in-situ sensors, and sampling. The effect of different climate scenarios and urban greening strategies on water demand and cooling effects will be investigated by using AI and SCOPE model. The project is part of the DFG Research Training Group Urban Water Interfaces ([www.uwi.tu-berlin.de](http://www.uwi.tu-berlin.de)).

The successful candidate must have a very good university degree (Master or equivalent) Geoecology, Geography, Hydrology, Environmental Sciences, Geosciences, or a related field with a strong focus on remote sensing.

Moreover, candidate should have

- Strong knowledge in image processing (satellite and/or drone, optical and thermal)
- Experience in programming preferably python and/or R and statistical analysis
- Interest and/or experience in machine learning and deep learning
- Willingness to do field work
- Very good command of English (speaking and writing)
- Interest/experience in collaborative work (e.g. with hydrologists, climatologists)
- A well-organized, highly motivated, and independent working attitude

**Supervisors:** Prof. Dr. Birgit Kleinschmit (TUB), Prof. Dr. Doerthe Tetzlaff (IGB and HU)

Host organization: Technische Universität Berlin. Please address enquiries to Prof Dr. Birgit Kleinschmit ([Birgit.Kleinschmit@TU-Berlin.de](mailto:Birgit.Kleinschmit@TU-Berlin.de)).

Applicants should submit the following documents: letter of motivation indicating research interests and experience and the project key W6, CV including 2 references, letter of recommendation (preferably from a professor), Bachelor and Master certificates, Master Thesis. Please **send your application in a single PDF** containing all application documents **using the online UWI application platform under:** <https://webserver.service.tu-berlin.de/candidate.php>