The Chair of Environmental Meteorology in the Institute of Earth and Environmental Sciences at the University of Freiburg (Germany) is advertising for a

**Post-doctoral researcher to work on eddy-covariance of urban greenhouse gas emissions**

Start-date: Earliest April 1, 2022 (or later, negotiable), 2,5-year contract at 100% E13 with possibility of an extension.

We are seeking a post-doctoral researcher to develop **eddy-covariance techniques to monitor and attribute carbon dioxide (CO₂) emissions in cities**. The goal of the research is to explore and test new approaches combing direct CO₂ flux measurements with fluxes of co-emitted species and isotopes. Using a fast multi-gas analyser and a relaxed sampler system, we will measure fluxes of multiple compounds intermittently between 2022 and 2024 on tall (~100m) towers operated as part of pilot observatories in Zurich, Paris and Munich. Measured fluxes of CO₂, its isotopic composition and co-emitted species will be combined with detailed source area models and fine-scale inventories to derive sector-specific flux ratios and to separate fossil fuel from biogenic carbon dioxide. This research is integrated into a multi-institutional effort to develop techniques to monitor urban emission reduction efforts and is coordinated by the European Research Infrastructure “Integrated Carbon Observation System” (ICOS, see [https://www.icos-cp.eu/projects/icos-cities-project](https://www.icos-cp.eu/projects/icos-cities-project)).

The work will include the preparation and operation of instrumentation during campaigns, data processing and quality control, and statistical data analysis in combination with models. Further a significant part of the work includes the preparation of scientific publications as first author, the publication of open datasets and contributions to reports.

The work place will be in Freiburg, Germany. The position will be offered at the Chair of Environmental Meteorology in the **Faculty of Environment and Natural Resources at the University of Freiburg (Germany)** and is supervised by **Prof. Dr. Andreas Christen** and co-supervised by **Dr. Samuel Hammer** from the **University of Heidelberg (Germany)**. The successful candidate will be involved in field campaigns in all three ICOS pilot cities in Zurich, Paris and Munich and is expected to disseminate results at project meetings, conferences and in scientific publications.

Applicants must hold a **doctoral degree**, or be very close to successful completion of a doctoral degree in **meteorology, environmental sciences, environmental physics, atmospheric chemistry, physical geography, ecosystem sciences or a related field**. Key competences include experience in operating field equipment (ideally with eddy covariance systems), ability to perform and organize field work, data analysis skills and experience with large datasets and time-series. Language requirement: English. Knowledge of German and/or French is an asset. The employment is according to TV-L E13 at 100% level for 2,5 years with the possibility of an extension. No teaching obligations.
If you are interested in this opportunity, please submit:

- Letter of intent detailing why you are interested in this position.
- Curriculum Vitae listing your education, your past experience, any scientific publications, conference presentations or talks, programming and language skills, experience in field campaigns.
- Copies of your university degree(s) with grades (B.Sc., M.Sc., doctoral degree), or alternatively documents that demonstrate imminent doctoral degree completion.
- Suggestion of two referees with contact details.

We particularly encourage applications from women for the position advertised here. International applicants are eligible to apply.

Please send in a complete application along with the above-mentioned supporting documents by February 28, 2022 at the latest. Please send documents with reference to “ICOS Cities post-doctoral position” to the following address in written or electronic form (max 10 MB). All electronic submissions will be confirmed.

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For further information, please contact Prof. Dr. Andreas Christen
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