

The mission of the Leibniz Centre for Agricultural Landscape Research (ZALF) as a nationally and internationally active research institute is to deliver solutions for an ecologically, economically and socially sustainable agriculture – together with society. ZALF is a member of the Leibniz Association and is located in Müncheberg (approx. 35 minutes by regional train from Berlin-Lichtenberg). It also maintains a research station with further locations in Dedelow and Paulinenaue.

The IPP project "Small Water Bodies in an agricultural landscape: Ecosystem services of spatial and temporal within-field transition zones (SWBTrans)" aims at the quantification of the supply of ecosystem services and disservices as provided by kettle holes in agricultural landscapes. Kettle holes are regarded as potential hotspots of biodiversity in the monotone arable land due to their high variability of site factors. This project addresses the lack of a systematic knowledge about the hydrological behavior of kettle holes and in particular the hydrological driven spatiotemporal interaction between kettle holes and their agricultural surroundings. This includes determining the conditions that cause flooding, their interaction with ecosystem services and disservices, the effects on yield, and the regulation of function feedbacks.

The project is divided into four workpacks and has been running since 2019. Within the work package "Hydrology and Remote Sensing" we are offering as soon as possible a 65% positions (TV-L 13) temporarily limited for 10 month at our location in Müncheberg.

Researcher (f/m/d) "Spatial analyses of small water bodies"

Your tasks:

- secure the processing of the image data captured with unmanned aerial systems (UAS)
- radiometric correction of UAS images
- geospatial analysis of processing products from UAS images
- estimation of crop biomass and soil moisture using processing products from UAS images and ground truthing data, i.e. multispectral orthomosaics, digital surface model, soil moisture measurements etc.,
- supporting preparation and analysis of hydrological data, i.e. times series of water level data from kettle holes, ¹⁸O and ²H stable isotopes
- Statistical analyses of results
- Publication of the results
- Co-operation with project partners

Your qualifications:

- Master (MSc) in Geocology, Hydrology, Environmental Sciences, or related fields, preferably a doctorate
- Preferably knowledge about small water bodies
- The willingness to deal with processing of UAS image data
- Knowledge about hydrological processes
- Advanced knowledge of geospatial analyses, for example with ArcGIS, QGIS, R and/or Python
- Experience in (multi)statistical analysis with R or others
- Publication experiences (very good at writing in English)

We offer:

- An interdisciplinary working environment that encourages independence and self-reliance
- Classification according to the collective agreement of the federal states (TV-L) EG13 (including special annual payment)
- A collegial and open-minded working atmosphere in a dynamic working group
- Taking part in a highly relevant research field, the promotion of ecosystem services and sustainable land use in agricultural landscapes

Women are particularly encouraged to apply. Applications from severely disabled persons with equal qualifications are favored. Please send your application preferably by e-mail (one PDF file, max. 5 MB; packed PDF documents, archive files like zip, rar etc. Word documents cannot be processed and therefore cannot be considered!) with the usual documents, in particular CV, proof of qualification and certificates, stating the reference number **26-2021** until **March, the 31.th.** to: Bewerbungen@zalf.de.

If you have any questions, please do not hesitate to contact us: Dr. Michael Glemnitz, Tel. +49 (0) 33432/82-264 or mglemnitz@zalf.de.

For cost reasons, application documents or extensive publications can only be returned if an adequately stamped envelope is attached.

If you apply, we collect and process your personal data in accordance with Articles 5 and 6 of the EU GDPR only for the processing of your application and for purposes that result from possible future employment with the ZALF. Your data will be deleted after six months.

You can find further information at: www.zalf.de/en/ueber_uns/Pages/Datenschutzerklaerung.aspx