Title

Research Scientist (w/m/d) with PhD option (80%)

Institution

The mission of the Leibniz Centre for Agricultural Landscape Research (ZALF) as a nationally and internationally active research institute is to deliver economically, environmentally 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.

Position

We are offering a research position within the BMBF funded junior research group “Towards healthy soils by using autonomous field robots in diversified agricultural landscapes” (SoilRob). SoilRob aims at examining whether the utilization of autonomous field robots and the integration of high-resolution data in diversified cropping systems can enhance soil health, boost soil-based ecosystem services, and stabilize or increase yields compared to conventionally managed fields. A comprehensive assessment of physical, chemical, and biological soil parameters related to soil-based ecosystem functions and sustainable development goals is conducted with beyond state-of-the art methods and technologies.

The activities of SoilRob are clustered in regard to five different soil-based ecosystem services: crop production, nutrient cycling with focus on nitrogen, water storage & filter, climate regulation, and biodiversity & habitat provision. Within this researcher position, we aim at collecting and exploring indicators to quantify soil-based ecosystem services of Filtering function & Water storage. The extensive data collection is carried out in patchCROP, an experimental platform and landscape laboratory managed partly with robots. Additional experimental sites for sample collection and field measurements will be established across five other locations in Germany. The objective of this comprehensive assessment is to quantify the changes in surface runoff regulation & water filtration by agricultural robots, mainly affected by their mechanical interventions such as weed control and reduced machine load. Additionally, the measurements will also be used to evaluate the impact of cropping diversification measures on relevant parameters of soil physics and soil hydrology.

This position is located in the ZALF research area “Land Use and Governance” in the working group “Resource-Efficient Cropping Systems” and includes a research scientist position for 4 years (TV-L EG13, 80%) starting from January 2024 and with the option to conduct a PhD.

We offer:

- an interdisciplinary and open-minded working environment that encourages independence and self-reliance
- broad network activities within the Junior Research group SoilRob
- membership in ZALF’s graduate program (incl. benefit from skill training courses)
- strong institutional commitment to a good work-life balance
classification according to the collective agreement of the federal states (TV-L) up to EG13 with a 80% weekly working time (including special annual payment)

company train ticket

Responsibilities

- conduct field measurements, samplings and observations on soil compaction, bulk density, infiltration, soil moisture, soil temperature and electrical conductivity
- apply and adjust different laboratory methods to determine water tension curves and soil texture
- conduct experiments for tillage and water erosion
- collaborate with project partners (e.g. BMBL Experimentierfelder)
- data analysis and public results presentation, e.g. at international conferences
- data exchange with other SoilRob activities and participation at Transfer events
- publish results in peer-reviewed internationally scientific journals

Requirements

- master of science in agriculture, soil science, geosciences, or related disciplines, with a focus on soils
- experience in field and/or laboratory work related to agriculture/soil science
- experience with geographical information systems and mapping is advantageous
- excellent communication skills in English
- knowledge of statistical data analysis, preferably with R or Python, is expected
- drivers licence strongly recommended
- willingness to travel within Germany for several days, for sampling campaigns and cooperation with project partners must be present

Application procedure (deadline etc.)

Women are particularly encouraged to apply. Applications from severely disabled persons with equal qualifications are favored. Please send your application preferably online (see button online application below). Please include a cover letter, a CV, copy of your MSc degree, transcripts (proof of qualification and certificates), and the names and contact information for three references, stating the reference number 105-2023 until November 6th, 2023 to: (see button e-mail application below).

https://jobs.zalf.de/jobposting/11562b2058387b0e9f0debcf66017c73ce0a00bc0

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.

Contact

If you have any questions, please do not hesitate to contact: Dr. Kathrin Grahmann, Tel. +49 (0) 33432/82-142, Kathrin.Grahmann@zalf.de.