Leibniz-Institut für Gemüse- und Zierpflanzenbau Großbeeren/Erfurt e.V.

With its work, the Leibniz Institute of Vegetable and Ornamental Crops (IGZ) contributes to a better understanding of plant systems and thus to the development of sustainable and resilient horticulture. The IGZ conducts research at the interface between plants, humans and the environment. In doing so, we address systemic and global challenges such as biodiversity loss, climate change, urbanization and malnutrition. We provide scientifically sound recommendations for healthy agri-food systems and sustainable interactions with the environment. The IGZ brings together a broad spectrum of scientific disciplines. Employees with different backgrounds conduct research in national and international research co-operations. The IGZ is based in Großbeeren near Potsdam and near Berlin and is a member of the Leibniz Association. The following position is available at the Institute, subject to approval by the funding organization, from October 1, 2025, limited for 2 years with the possibility of 2 years extension, in the programme area "Next-Generation Horticultural Systems" (HORTSYS), in the research group "Open Field Horticultural Systems" within the EU-HORIZON project NitroScope - "Scoping European N-fluxes for sustainable N-management and conservation practices":

Scientist (f,m,div.) in the Field of Geodata, Nutrient and Soil Parameter Modelling

Reference Number: 22/2025/4

City: Großbeeren; Starting date (earliest): 01/10/25; Duration: 2 years; Remuneration: up to EG 13 TV-L; Reference number: 22/2025/4; Closing date: 19/08/25

Working field

The position is in close collaboration with Prof. Dr. Hermann Jungkunst at the Rheinland-Pfälzische Technische Universität Kaiserslautern-Landau (RPTU) and the salary will be shared. As for a total of 80%, the salary will be based on the qualification and research experience according to the wage agreement TV-L, up to pay scale 13 with 40% of the regular working time covered by the IGZ and 40% covered by the RPTU (two work locations and two employment contracts).

The NitroScope project aims to develop systemic solutions to quantify and manage nitrogen (N) fluxes across Europe, from local fields to the continental scale. Its goals include reducing N losses, particularly from nitrate leaching and nitrous oxide (N_2O) emissions by extensive site monitoring testing conservation practices like variable-rate fertilization, and engaging land managers through farm-based tools and a revised European nitrogen budget. The project is in close collaboration with other institutions across Europe, e.g., University Ghent, Belgium or Agroscope, Switzerland.

Tasks include
• create a N model ensemble of at least 4 process-based models (DayCent, LDNDC, Daisy, Candy)
• model within-field N-fluxes (e.g., N2O-losses, NO3-leaching, N-mineralization) for optimized N-fertilisation rates and N loss predicitions

• integration and testing of the model ensemble into a database driven cloud architecture
• upscale the modelled N-fluxes across European pedo-climatic zones
• support monitoring, reporting and verification of greenhouse gas emissions and mitigation efforts
• support reduction in model uncertainties associated with the estimates of the full N budget at the European continental scale and improve knowledge on the mechanisms governing N translocation
• publication and presentation of research results

Requirements

• a Master's or Diploma degree with several years of professional experience in the field of agricultural sciences, mechatronics, geoinformatics, geography, geo-/landscape ecology, agroecology, soil science or another discipline appropriate to the project content, preferably with a PhD
• very good knowledge and proven experience in the field of climate- and texture-dependent calculation of N-dynamics using process-based models (e.g., DNDC, Daycent, Daisy or CANDY or similar models)
• advanced understanding of the mechanisms governing N translocation from soil to crop, including gaseous emissions and subsurface leaching into groundwater within agricultural systems
• proven experience in the field of R-supported programming (others possible, e.g., Python) of complex data preparation and evaluation procedures as well as very good knowledge in the acquisition and processing of geodata in databases
• proven experience in the publication and communication of scientific results
• willingness to travel and work together with European partners
• scientific working method, very good communication in English and organisational skills

What we offer

• an attractive workplace at a modern research institute for horticultural sciences
• a pleasant and respectful working atmosphere and integration into a successful and committed team
• flexible and family-friendly working time models and the possibility of mobile working (up to 50% of working time)
• subsidy for the company ticket for local public transport or for the Germany ticket

More information on about the IGZ you can find under www.igzev.de. For questions, please contact: Dr. Eric Bönecke (+49(0)33701 78 223, boenecke@igzev.de).

We encourage a healthy work-life balance. The IGZ attaches great importance to equal opportunities. Applicants with disabilities will be given preference in case of equal qualifications. The IGZ embraces diversity in its workforce, and welcomes applications from all qualified candidates, irrespective of age, gender, sexual orientation, religion, world view, disability and belief or ethnic origin.

Application

Please send your complete application (stating the reference number and including a motivation letter, your CV, academic certificates, and the names and addresses of two references incl. your earliest possible starting date) by email to bewerbung@igzev.de in pdf format by August 19th, 2025.

More information at https://stellenticket.de/196882/LUH/
Offer visible until 19/08/25