

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.

To contribute to the target of resource optimization in protected environment crop production through smart systems we look for an enthusiastic and ambitious

Scientist (f,m,div) in the area "CEA Systems Modelling"
Reference Number: 04/2025/4

The employment will be initially from April 1, 2025 to March, 31 2026. The salary will be based on qualification and research experience according to the wage agreement TV-L, up to pay scale 13, full time.

The scientist will be part of the research group HORTSYS-Controlled environment horticultural systems. The main research in this group is aiming at resource-use optimised crop production in Controlled environment horticultural systems (CEA). We work towards solutions for resource conservation in greenhouses and controlled environments with mathematical modelling approaches. Use cases are model-based climate control in dynamic climate conditions and production monitoring. We build upon an existing Matlab-coded model simulator as basis.

The position will be among others be embedded in the EU Horizon Europe project EcoNutri where we focus on creating models and perform simulation studies of future solutions of agricultural production systems. In this project we participate as WP-coordinator for systems modelling and environmental assessment within an international consortium of 36 partners throughout Europe and China.

Tasks include

- developing process-based mathematical models of sub-processes within CEA production systems
- embedding models in the existing Matlab-based simulator
- data management
- performing simulation studies
- producing and collaborating on scientific publications in high quality journals
- supervision of bachelor, master, and PhD students
- active participation in the coordination of the EcoNutri project
- presentation of results to international scientific audience within the project and beyond

We are looking for highly motivated candidate with the following qualifications and profile

- a PhD with emphasis on horticultural or agricultural context
- strong background in process-based mathematical modelling of crop production systems in horticulture or agriculture
- knowledge of mathematical process-based mathematical modelling
- ability to translate horticultural processes to equations and to systems
- experience or ability for quick learning of the programming environment Matlab
- excellent organization and English language communication skills
- open, flexible and positive person, able to take the initiative
- readiness to integrate into an international working environment

We offer

- an inspiring and dynamic research environment, including state-of-the art research facilities
- possibility for career development in the field of high-technology crop production
- participation in a successful, dedicated and team-oriented research group
- flexible and family-friendly working time models and the possibility of mobile working (up to 50% of working time)
- a place of employment located close to Berlin and Potsdam
- subsidy for the company ticket for local public transport or the Germany ticket

More information on about the IGZ you can find under www.igzev.de. For questions, please contact: Dr. Oliver Körner (+49(0)33701 78 355; koerner@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.

Please send your application including a strong motivation letter stating why this is an interesting topic for you and why you have the right expertise, your CV, copies of academic certificates, and the names of two references by email to bewerbung@igzev.de in pdf format by February 9, 2025. Our postal address is: Leibniz-Institute for Vegetable and Ornamental Crops, Theodor-Echtermeyer-Weg 1, D-14979 Großbeeren.