The Leibniz-Institute of Vegetable and Ornamental Crops (IGZ) conducts excellent research in a broad range of fields related to horticultural sciences in order to promote the sustainable production of vegetable and ornamental crops. Controlled Environment Horticulture, the cultivation of vegetables and ornamental crops inside structures such as greenhouses, is one focus of our institute.

Damages to the physiological apparatus caused by plant stress are known to be reversible up to a certain point, while mild stress can have positive effects on plants in terms of harvest product composition and other quality parameters. A possible solution to detect stress would be to combine data information from sensors with plant physiological models to so-called soft sensors supplying information about the underlying plant physiological processes.

To contribute to the target of the team "Protected Cultivation Systems" on creating model based decision support tools to the optimum of plant stress and resource use efficiency in horticultural crop production, we look for a person that can combine mathematical modelling, greenhouse technology and plant physiology. In that crossing field of high-tech protected cultivation, we offer the position of a:

**PhD student in the area "Methods for mild and early crop stress handling"**

*Reference Number 13/2018/4*

to join our team at the earliest possible date. The PhD student will be working at the IGZ site in Großbeeren (close to Berlin) and will be enrolled in the scientific program at Wageningen University, Horticultural Physiology Group. The employment will be initially for four years.

The salary will be based on qualification and research experience according to the wage agreement TV-L, salary domain east, up to EG 13 (65% of the regular working time).

Tasks include
- Design and execution of plant growth and lab experiments
- Data collection and analyses
- Mathematical modelling of crop physiological processes
- Sensor – Model interaction work
- Creating decision support system bases
- Writing scientific publications to a compendium of a PhD Thesis
- Supervision of bachelor and master students
- Presentation of results to international scientific audience

We are looking for a highly motivated candidate with mathematical and biological interest and following qualifications
- A Master (MSc) in horticulture, agriculture, environmental science, or a related field
- Working experience on plant production and/or horticultural crop production
- Experience of plant cultivation technologies
- Knowledge of mathematical analytics and ability to translate processes to equations/systems
- Experience or strong interest in modelling with Matlab, R or a related programming environment
- Interest in travelling and many short term and/or long term stays in Wageningen (NL)
- Excellent organization and English language communication skills
- Open, flexible and positive person, able to take the initiative

We offer
- An inspiring and dynamic research environment, including state-of-the-art research facilities
- An exciting international collaboration project between IGZ and Wageningen University
- A place of employment located close to Berlin and Potsdam

Please send a strong motivation letter stating why this is an interesting topic for you and why you have the right attitude and expertise to contribute to the project and make progress in this special cross-over field of technology, mathematics and biology. Also send your CV, copies of highschool and academic certificates, names of up to three references and indicate your earliest possible starting date.

Contact: Dr. Oliver Körner (+49(0)33701 78 355; koerner@igzev.de).

IGZ is an equal opportunity employer. Handicapped people with equal qualifications will be employed preferentially. The IGZ wishes our staff to reflect the diversity of society and thus welcomes applications from all qualified candidates regardless of age, gender, race, religion or ethnic background.

Please send your application citing the reference number by 13 September 2018 to: Personalbüro, Institute for Vegetable and Ornamental Crops, Theodor-Echtermeyer-Weg 1, D-14979 Großbeeren or online in pdf-format to personal@igzev.de.