The Crop Science Group at the University of Bonn seeks to employ, begin: May 2020 (or as soon as possible), max. until December 31, 2022

2 Doctoral Students (65%) (TV-L 13)

The successful candidates will be involved in the Cluster of Excellence “PhenoRob: Robotics and Phenotyping for Sustainable Crop Production” (http://www.phenorob.de/) funded by the Deutsche Forschungsgemeinschaft. The approach of PhenoRob is characterized by the integration of robotics, digitalization, and machine learning on one hand, and modern phenotyping, modeling, and crop production on the other. Specifically, the research will contribute to the Cluster via a Junior Research Group of Core Project CP5 ("New Field Arrangements") with the focus on crop mixtures. The overarching research question in CP5 is how crop diversification implemented at different spatial scales (extent and resolution) affects the multifunctional response of agroecosystems (e.g. in terms of crop growth, yield, input reduction, resource use and use efficiency and biodiversity).

The overall objectives of the proposed Research Group are to i) obtain data using classical and new methods and technologies to gain insights into interactions and mechanisms in crop mixtures, ii) develop new and advanced crop models for crop mixtures, iii) determine optimal field arrangements (e.g. species combination, arrangements and proportion) and management (e.g. sowing, fertilization, harvest) in mixtures for a sustainable and climate-resilient crop production by combining highly monitored experiments and models. One doctoral student will focus on light distribution and above-ground competition between crops (strip intercropping) and between crops and weeds. The main objective of the other doctoral student will be to gain insights into the below-ground interactions and dynamics (soil water, soil nutrients, and root growth).

Your tasks:
- Regular observations in the field
- Application and improvement of field scale crop growth models
- Publishing results in peer reviewed journals and presenting them at conferences
- Collaborating with colleagues involved in the Cluster of Excellence

Your profile:
- An excellent Master degree in agriculture, ecology or related disciplines, with a focus on crop science and/or crop modelling
- Experience in field experimentation and/or crop modeling
- An interest in interdisciplinary and collaborative research

We offer:
- Participation in the international research hub The Cluster of Excellence “PhenoRob”
- An open, stimulating and interdisciplinary work environment where good ideas are encouraged and supported
- The opportunity of conducting research towards a PhD and of receiving the support necessary to do this successfully
- Enrolment in the Graduate School of the Agricultural Faculty
- 65% TVL E13 on the salary scale

Applicants please submit (1) A letter of motivation including your specific research interest (max. 2 pages), (2) a curriculum vitae including a list of publications, (3) a copy of your Master degree, (4) the names and contact details of two referees (position, professional address and e-mail).

The University of Bonn is committed to diversity and equal opportunity. It is certified as a family-friendly university and aims to increase the number of women employed in areas where women are under-represented and to promote their careers. To that end, it urges women with relevant qualifications to apply. Applications will be handled in accordance with the Landesgleichstellungsgesetz (State Equality Act). Applications from suitable candidates with a certified disability or equivalent status are particularly welcome.

If you are interested in this position, please submit your complete application documents as a single pdf by April 20, 2020 to Dr. Sabine Seidel (Email: sabine.seidel@uni-bonn.de), reference “Phenorob CP5”.