

Helmholtz Call for Chinese Applicants Interested in Running for CSC 2021 Fellowship

- Helmholtz Centre:** Forschungszentrum Jülich GmbH – www.fz-juelich.de
- Department/Institute:** Institute of Bio- and Geoscience, Plant Sciences (IBG-2)
https://www.fz-juelich.de/ibg/ibg-2/EN/Home/home_node.html;jsessionid=0B2D2D63A1869E53D9199B3DB05A24A7
- Supervising scientist:** Prof. Dr. U. Schurr, Dr. Fabio Fiorani
- Research Field:** Crop resilience to climate change
- Position open for:** Visiting Scholar **Postdoc X**
- Title of the research:** Rapeseed and barley responses to combined elevated CO₂ and nitrogen regimes.
- More description of research topic:**

Phenotypic plasticity is at the basis of crop responses to limiting environmental factors, such as temperature, water and nutrient availability, and salinity, to name only the most important ones globally. In this respect, a wealth of research is dedicated to study individual factors and assess genotypic responses. However, typically environmental factors co-occur and interact in agricultural fields and natural plant stands alike. For example, high temperature and drought events. The fundamental challenge that will be tackled in this research project can be summarized in the research question: what are the limits of phenotypic plasticity at critical crop growth stages in multiple-stress scenarios? Concretely and experimentally this question will be addressed focusing on a two major crops that can serve as a model for assessing the combined effect of prominent factors limiting productivity in multi-factorial experiments. The environmental factors that will be considered with priority are elevated carbon dioxide in combination with different nitrogen supplies at varying temperature regimes.

Specific requirements:

A PhD in agronomy or plant eco-physiology or related discipline will be required for conducting this research. Practical experience with plant physiology techniques and plant phenotyping are a pre-requisite. Experience with functional characterization of mutant genotypes will be seen as an asset. Very good knowledge of statistical software, such as R, is required. Academic record of publications and their impact will be considered in detail.

- Funding:** CSC-scholarships will be increased by hosting institution (500 €month and costs for health, emergency-call and liability insurance (50 €))
- Working Place:** Forschungszentrum Jülich, Germany (near Cologne)
- Earliest Start:** September 2021
- Language Requirement:** Very good knowledge of English language, written and spoken. German language courses are organised in the context of our in-house training program and are free of charge.

Name and Address of the Supervisor: Forschungszentrum Jülich, Dr. Fabio Fiorani,
Institute of Bio- and Geo-Sciences (IBG-2), 52425 Jülich, Germany
f.fiorani@fz-juelich.de