



High-Throughput Phenotyping of Crop Traits: Progresses, Opportunities, and Challenges

Guest Editors:

Dr. Peng Fu

pengfu@illinois.edu

Dr. Katherine Meacham-Hensold

katmeach@illinois.edu

Dr. Jin Wu

jinwu@hku.hk

Prof. Dr. Carl Bernacchi

bernacch@illinois.edu

Deadline for manuscript
submissions:

31 December 2020

Message from the Guest Editors

This Special Issue aims at showcasing the latest developments in HTP platforms (HTPPs), sensing technologies, and methodological advances to measure crop phenotypic traits from a proximal and remote sensing perspective. We also welcome review papers to synthesize the recent progresses of high-throughput phenotyping and to discuss those grand challenges remaining unresolved. In this Special Issue, potential topics include but are not limited to:

- High-throughput phenotyping platforms (HTPPs), such as unmanned aerial vehicles, robots, and gantries that have an important component in close-range/remote sensing;
- Innovative use of new sensors to collect phenotypic data (e.g., LiDAR, solar-induced fluorescence, thermal sensor);
- State-of-the-art techniques to process phenotypic measurements (e.g., deep learning);
- Data fusion (e.g., fusion of multisource data, such as structural, optical, physiological, and thermal data) for understanding plant growth;
- Advances in hyperspectral remote sensing for phenotyping;
- Phenotyping of plant stress (e.g., disease and drought stress).

