Special Issue

Plant Phenotyping and Machine Learning

Message from the Guest Editors

Plant phenotyping quantifies the structural and functional attributes of plants, essential for non-destructive and continuous crop morphology and physiology analysis. The complexity of plant growth, including variations in size, morphology, color, texture, and organ development, as well as the impact of environmental factors, poses challenges in plant phenotyping. Machine learning, particularly deep learning, offers robust solutions for complex issues, providing new tools for analyzing, predicting, and understanding plant traits. This Special Issue invites submissions addressing plant phenotyping and machine learning. Specific topics of interest include, but not limited to, the following:

- Image-based phenotyping, including plant classification, segmentation, and detection.
- Extraction and selection of plant phenotypic traits.
- Plant growth monitoring, analysis, modeling, and prediction.
- Disease detection and monitoring.
- Assessment and prediction of plant resistance (including biotic and abiotic stresses).
- Temporal image processing and analysis of plants.
- Data analysis algorithm and software for plant phenotyping.
- Phenotype prediction and classification.

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About the Journal

Message from the Editor-in-Chief

Plants is an open access journal which provides an advanced forum for research findings in areas related to plant function, its physiology, biology, taxonomy, stresses, and its interactions with other organisms. It publishes original research articles, reviews, reports, conference proceedings (peer reviewed full articles) and communications. In original research papers, it is important that full experimental details are provided. We also encourage timely reviews and commentaries on topics of interest to the plant research community.

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