Special Issue

Spectral Data Analytics for Crop Growth Information

Message from the Guest Editors

Crop spectral intelligent sensing and analytics represent a transformative force driving the development of digital agriculture. This technology enables high-throughput, non-destructive, and real-time monitoring of key growth parameters such as nutritional status, water dynamics, and stress responses by acquiring and interpreting spectral information from crops. The deep integration of artificial intelligence and machine learning methods has significantly enhanced the accuracy and efficiency of multi-trait crop phenotyping. This has not only substantially improved the capabilities of growth modeling, stress, and yield prediction, but also provides critical support for genotype–phenotype association analysis. Topics of interest include, but are not limited to, the following:

- Advanced Spectral Sensing Technologies;
- Intelligent Analytics Algorithms and Models;
- Phenomics and Breeding Applications;
- Integrated Digital Agriculture Applications;

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