



Multimodal Remote Sensing and Imaging for Precision Agriculture

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Message from the Guest Editor

Agriculture systems are facing a variety of stresses (e.g., diseases and insect pests, drought, heat, cold, frost, flooding, excess or deficiency of fertilization, and environmental pollution) due to ever-increasing human interference and ongoing climate change. It is essential to accurately and rapidly identify and quantify these stresses to support decision making. The rapid development of multimodal imaging techniques has greatly facilitated classification, monitoring, identification, diagnosis, and assessment in agriculture. Specific topics include but are not limited to the following:

- Crop mapping
- Vegetation health monitoring
- Species detection (e.g., illicit/invasive plants)
- Agricultural crop assessment
- Yield prediction and quality
- In-field phenotyping estimation
- Plant disease detection
- Model-based trait analysis (e.g., by considering 3D plant models)
- Crop mapping based on multimodal acquisitions (e.g., multi/hyperspectral, thermal, LiDAR point clouds, fluorescence, and SAR imaging)
- Time-series analysis for agriculture monitoring
- In-situ remote sensing measurements (e.g., robotic vision)





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Message from the Editor-in-Chief

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