# Special Issue

# Machine Learning and Spectroscopy for Plant Phenotyping and Physiological Analysis

## Message from the Guest Editors

Recent advancements in machine learning (ML) and spectroscopy have revolutionized plant phenotyping and physiological analysis. This Special Issue aims to explore the intersection of these technologies in advancing plant science, offering innovative solutions for plant research, crop management, and environmental monitoring. ML algorithms and spectroscopy techniques, such as hyperspectral and multispectral proximal and imaging sensing, have proven invaluable in enhancing the precision and efficiency of phenotyping, enabling a deeper understanding of plant growth, health, and responses to environmental factors.In this Special Issue, we invite contributions that address the application of ML algorithms and spectroscopy in plant phenotyping, ranging from the analysis of plant morphology to the study of physiological traits such as photosynthesis, chlorophyll fluorescence, and gas exchange. We also welcome studies on the integration of these tools with remote sensing and UAV technologies, particularly in general plant analysis, precision agriculture, and large-scale crop monitoring.

## Guest Editors

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## Deadline for manuscript submissions

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### 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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