Special Issue

Application of Optical and Imaging Systems to Plants

Message from the Guest Editor

In recent decades, the application of optical and imaging systems has revolutionized plant science, providing researchers and scholars with powerful tools to explore the structure, function, and behavior of plants and crops. These technologies have become essential in addressing critical challenges in agriculture, plant biology, and environmental monitoring. By enabling precise, non-invasive, and high-throughput measurements, optical and imaging techniques facilitate a deeper understanding of plant physiology, stress responses, growth patterns, and interactions with the environment. The development of advanced optical systems, including hyperspectral imaging, infrared thermography, Raman spectroscopy, and lidar, has opened new possibilities for detecting subtle changes in plant health, diagnosing diseases, and monitoring crop yields. These tools also play a pivotal role in precision agriculture, where real-time data acquisition and analysis drive sustainable farming practices and optimize resource use. This Special Issue aims to highlight the latest advancements, innovations, and applications of these technologies in the study of plants and crops.

Guest Editor

Dr. Massimo Rippa

Institute of Applied Sciences and Intelligent Systems “E. Caianiello” of CNR, 80072 Pozzuoli, Italy

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Plants
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
plants@mdpi.com

mdpi.com/journal/plants

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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.

Editor-in-Chief

Prof. Dr. Dilantha Fernando
Department of Plant Science, University of Manitoba, Winnipeg, MB R3T 2N2, Canada

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