Special Issue

Machine Learning in Plant Identification and Phenological, Anatomical, and Morphological Research

Message from the Guest Editors

Recent advances in imaging and information technology have led to the massive production of digital images of plant specimens and of living plants around the world. This new and rich material, directly produced in the field offers new opportunities to study plant phenology and to identify wild plant species and domesticated varieties.

Computer vision and machine learning approaches are highly promising technologies for taking advantage of this new digital material. Deep learning technologies, in particular, have been recently shown to achieve impressive performance on a variety of predictive tasks. Nevertheless, their use to support innovative phenological studies is quite low. In this Special Issue, we welcome the submission of scientific articles focused on the development of new machine learning techniques applied to phenological, anatomical, or morphological features of plants, particularly those that focus on new types of data produced or analysed with machine learning. We hope to increase the visibility of machine learning tools and promote scientific research at the frontiers of environmental / life science and computer science.

Guest Editors

Dr. Pierre Bonnet

Dr. Alexis Joly

Prof. Dr. Susan J Mazer

Deadline for manuscript submissions

closed (31 October 2021)

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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

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