Special Issue

Intelligent Detection and Classification of External Traits in Crop Plants, Fruits, and Vegetables

Message from the Guest Editors

A technological revolution is currently taking place in agriculture, termed 'Agriculture 4.0'. Modern, intelligent solutions are being introduced, mainly based on the digitalization of production processes and the classification and qualitative assessment of agricultural crops, fruit, and vegetables. Intelligent solutions are extremely helpful for extracting quality characteristics of agricultural products based on shape, color, texture, and light spectrum. Texture, shape, and color characteristics of agricultural products are used to detect damaged apple or orange areas, weeds, and pests. Computer image analysis has become one of the main techniques used in agriculture to assess seeds and grains in terms of quality losses.

In this Special Issue, we aim to exchange knowledge on precision agriculture, the use of computer systems in agricultural production, the application of artificial neural networks and image analysis for qualitative and quantitative classification of field crops, vegetables, and fruit, and the use of genetic algorithms to manage machinery and evaluate its efficiency.

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