



***machines***

an Open Access Journal by MDPI



## **Recent Advances in Computer Vision Technology and Its Agricultural Application**

Guest Editors:

**Dr. Xiangjun Zou**

**Dr. Hao Gan**

**Dr. Zhiguo Li**

**Dr. Yunchao Tang**

### **Message from the Guest Editors**

This research topic relates to several computer vision applications in industrial and agricultural fields, mainly autonomous driving, surface defect detection, object detection and localization, automatic harvesting robotics, plant phenotyping, and crop yield estimation.

Topics of interest include (but are not limited to):

- Computer vision-based autonomous driving algorithms that can robustly detect pedestrians, lane lines, and other targets.
- Generalizable, real-time surface defect detection methods.
- End-to-end, real-time, deep neural networks that can detect and locate objects simultaneously.
- Fruit/vegetable detection and localization for automatic harvesting robots, specifically end-to-end, real-time, and precise deep neural networks that can detect target produce in fields.
- Generalizable methods for segmenting or reconstructing plant parts to support plant phenotyping processes.
- Crop yield estimation.

We look forward to receiving your contributions.



[mdpi.com/si/73962](https://mdpi.com/si/73962)

# **Special Issue**



an Open Access Journal by MDPI

## **Editor-in-Chief**

**Prof. Dr. Antonio J. Marques  
Cardoso**

CISE—Electromechatronic  
Systems Research Centre,  
University of Beira Interior,  
Calçada Fonte do Lameiro, P -  
6201-001 Covilhã, Portugal

## **Message from the Editor-in-Chief**

*Machines* is an international, peer reviewed journal on machinery and engineering. It publishes research articles, reviews and communications.

Our aim is to encourage scientists to publish their experimental and theoretical results in as much detail as possible. There is no restriction on the length of the papers. Full experimental and/or methodical details must be provided.

There are, in addition, unique features of this journal: Manuscripts regarding research proposals and research ideas will be particularly welcomed; Electronic files or software regarding the full details of the calculation and experimental procedure - if unable to be published in a normal way can be deposited as supplementary material.

## **Author Benefits**

**Open Access:** free for readers, with article processing charges (APC) paid by authors or their institutions.

**High Visibility:** indexed within *Scopus*, *SCIE (Web of Science)*, *Inspec*, and other databases.

**Journal Rank:** JCR - Q2 (*Engineering, Mechanical*)

## **Contact Us**

---

*Machines* Editorial Office  
MDPI, St. Alban-Anlage 66  
4052 Basel, Switzerland

Tel: +41 61 683 77 34  
[www.mdpi.com](http://www.mdpi.com)

[mdpi.com/journal/machines](http://mdpi.com/journal/machines)  
[machines@mdpi.com](mailto:machines@mdpi.com)  
X@Machines\_MDPI