Special Issue

Advances in Robotic Systems for Precision Orchard Operations

Message from the Guest Editor

Driven by advancements in artificial intelligence, sensing technologies, and intelligent machinery, precision orchard robotics has evolved from simple automation to complex systems capable of making autonomous decisions. This Special Issue aims to compile cutting-edge research on the development and integration of robotic systems for precision orchard management. We seek to explore innovative solutions that enhance the efficiency, accuracy, and sustainability of fruit production. The scope of this Special Issue encompasses a wide range of technologies, including precision spraying, intelligent weeding, automated pruning, flower and fruit thinning, growth monitoring, pest and disease identification, yield estimation, field survey, remote sensing, and selective harvesting. We encourage submissions that present original research on cutting-edge technologies, such as novel sensor fusion, advanced machine learning algorithms for perception and decision-making, robust robotic manipulation under uncertainty, and seamless multirobot coordination. Studies on field validation, scalability, and the economic and environmental impacts of these systems are also highly relevant.

Guest Editor

Prof. Dr. Hongjun Wang

College of Engineering, South China Agricultural University, Guangzhou 510642, China

Deadline for manuscript submissions

10 March 2026



Agriculture

an Open Access Journal by MDPI

Impact Factor 3.6 CiteScore 6.3



mdpi.com/si/254519

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

mdpi.com/journal/agriculture





Agriculture

an Open Access Journal by MDPI

Impact Factor 3.6 CiteScore 6.3



About the Journal

Message from the Editor-in-Chief

Agriculture (ISSN 2077-0472) is an international, scholarly and scientific open access journal publishing peer-reviewed research papers, review articles, communications and short notes that reflect the breadth and interdisciplinarity of agriculture.

Editor-in-Chief

Prof. Dr. Les Copeland

Sydney Institute of Agriculture, School of Life and Environmental Sciences, The University of Sydney, Sydney, NSW 2006, Australia

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), PubAg, AGRIS, RePEc, and other databases.

Journal Rank:

JCR - Q1 (Agronomy) / CiteScore - Q1 (Plant Science)

