

Special Issue

Cutting-Edge Technology in Agricultural Robotics: Sensing and Actuation

Message from the Guest Editor

This Special Issue aims to gather the latest research and innovations at the intersection of robotics, automation, and agriculture, focusing on the core areas of sensing and actuation. We invite submissions that explore the following topics: Vision-Based Sensing and Perception: crop and weed detection, disease monitoring, and environmental perception; Precision Actuation: innovations in robotic arms, cutting tools, and other actuators specifically designed for agricultural tasks; Hand-Eye Coordination Control: algorithms and systems that enhance the hand-eye coordination of robots in dynamic and unstructured environments; Design and Control of Novel End-Effectors, such as soft robotics and biomimetic designs, that can handle delicate agricultural products with care and precision; Multi-Arm Coordination: innovations in the design and control of multi-arm robotic systems for agriculture; Sensing and Reconstruction: 3D mapping, sensor fusion, and data-driven modeling approaches; Motion Planning: cutting-edge research in motion planning for agricultural robots, addressing challenges such as path optimization, obstacle avoidance, and safe navigation in dynamic farm environments.

Guest Editor

Prof. Dr. Jin Yuan

School of Mechanical and Electronic Engineering, Shandong Agriculture University, Taian 271018, China

Deadline for manuscript submissions

30 October 2025



Agriculture

an Open Access Journal
by MDPI

Impact Factor 3.6
CiteScore 6.3



mdpi.com/si/218678

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

[mdpi.com/journal/
agriculture](https://mdpi.com/journal/agriculture)





Agriculture

an Open Access Journal
by MDPI

Impact Factor 3.6
CiteScore 6.3



[mdpi.com/journal/
agriculture](https://mdpi.com/journal/agriculture)



About the Journal

Message from the Editor-in-Chief

Agriculture (ISSN 2077-0472) is an international, cross-disciplinary and scholarly journal on the science and technology of crop and animal production, and management of the natural resource base for agricultural production. We invite submissions from authors according to the aims and scope of the journal described in more detail on this page. *Agriculture* is published in an open access format – articles are published on the journal's website immediately after acceptance, giving the scientific community and the public unlimited and free access to the content.

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)