



robotics



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Advances in Agriculture and Forest Robotics

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Deadline for manuscript
submissions:

28 February 2021

Message from the Guest Editors

Dear Colleagues,

This Special Issue is dedicated to new advances in robotics in agriculture and forestry. The objective is to publish the works developed in robotics with applications in the agricultural and forestry areas, in which automation and intelligence play important roles. The focus of this Special Issue is on the presentation of several theoretical and practical problems related to robotics, in addition to new discoveries, new ideas, and innovative improvements made in the field of robotics in agriculture and forestry.

Topics of interest include, but are not limited to the following:

- Robots for pruning, thinning, harvesting, mowing, spraying, and weed removal
- Robots for forest biomass harvesting
- Robots for planting trees in forests
- Fire-fighting robots
- Aerial robots for forest monitoring
- Aerial and ground robotic platforms for soil/crop monitoring, prediction, and decision making
- Aerial robotics for environmental and agricultural applications
- Fruit and flower detection and recognition
- Approaches to cost-effective sensing for day/night continuous operation
- Long-term autonomy and navigation in unstructured farming environments
- Manipulators and platforms for soil preparation, seeding, crop protection, and harvesting
- Adaptive sampling and informative data collection
- Adaptive technologies that manage plants, soil, or animals according to as-sensed status
- Theoretical and empirical decision-oriented data-analysis techniques including machine learning



mdpi.com/si/50535

Special Issue



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Message from the Editor-in-Chief

It is my great pleasure to welcome you to our open access journal, *Robotics*, which is dedicated to both the foundations of artificial intelligence, bio-mechanics and mechatronics, and the real-world applications of robotic perception, cognition and actions. The 21st century is the robotics century and intelligent robots will change our lifestyle forever. Let us work together toward the realization of intelligent robots step by step.

It is great fun to create intelligent robots and imagine their practical applications. *Robotics* is now ready to serve you in the long journey towards such a goal.

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