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## Agricultural and Field Robotics

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

Dear Colleagues,

Agricultural mechanization; use of machinery to perform laborious operations; has helped improve agricultural productivity through more efficient use of labor, increased timeliness of operations, and more efficient input management. Continuing advancement in agricultural mechanization and automation technologies in recent decades has led the agriculture into an era of robotic farming era. Agricultural robots, in general, can be defined as a line of intelligent machinery that exhibits some similar behaviors to a human operator, such as the capabilities of perception, reasoning and manipulation in farming settings to perform predetermined operations and tasks, with or without human supervision. Such robotic technologies have a potential to further reduce the use of labor and increase the precision and efficiency of production inputs thus contributing to increased agricultural productively and long-term sustainability of the industry.

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

- Sensing technologies for situation awareness in agricultural applications
- Control strategies for robot manipulation in agricultural applications
- Automatic guidance of robotic vehicle in agriculture sites
- UASs or drones in agriculture
- Robotics for row crop production
- Robotics for specialty crop production (including fruit and vegetable)
- Robotics for greenhouse and vertical farming systems
- Robots for animal production
- Machine learning and artificial intelligence in agriculture
- Applications and supervision of agricultural robots
- Management and maintenance of agricultural robots
- Robotic farming economic analysis



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# Special Issue



# robotics



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## Editor-in-Chief

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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 21<sup>st</sup> 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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