Special Issue

Machine Learning and Artificial Intelligence for Better Perception, Estimation and Control Algorithms in Robotics

Message from the Guest Editors

During the last several years, a range of advanced algorithms in robotics have been developed, especially with the new generation of autonomous robots, which require a set of skills to carry out complex tasks autonomously. Perception, estimation and control algorithms are the fundamental capabilities with which these robots must be equipped in order to improve their navigation. Robots' tasks in real environments are not simple, and have been the focus of the scientific community's effort for decades, among these tasks are navigation and localization, environmental perception, path planning, moving between targets, real-time reactions to unexpected events, and people and object tracking. Machine learning (ML) techniques present an opportunity to address the challenges facing the discipline through data-driven solutions. We are convinced that these techniques can better improve dedicated algorithms for perception, estimation and control. This Special Issue aims to publish novel works that apply machine learning and computational intelligence techniques for better perception, estimation and control algorithms in robotics.

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developments and scientific research in the huge area of physical, chemical and biochemical sensors, including remote sensing and sensor networks. Both experimental and theoretical papers are published, including all aspects of sensor design, technology, proof of concept and application. Sensors organizes Special Issues devoted to specific sensing areas and applications each year.

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