Special Issue

Sensor Based Perception for Field Robotics

Message from the Guest Editors

Field robots must be able to perceive the three-dimensional world around them in ways that enable safe and efficient autonomous decision making. This requires algorithms that interpret and integrate measurements from different sensors. Several distinct sub-problems exist that are usually nuanced by the application and the environment in which the field robot operates. Problems include (1) localization and mapping, (2) object identification, verification and classification, (3) field-based sensor calibration, (4) object tracking and pose estimation, and (5) multi-agent sensor fusion. The development of algorithms that robustly meet the timeliness and accuracy requirements for these problems is a key challenge for the development of any field robot. This Special Issue invites papers that address solutions for field robotics perception problems, including identification problems, and that address the limitations of existing approaches. For detailed information, please visit here.

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Sensors is a leading journal devoted to fast publication of the latest achievements of technological 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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