Special Issue

Object Detection via Point Cloud Data

Message from the Guest Editors

Autonomous platforms often require the ability to interact with objects in their immediate environment. These interactions can manifest, for example, as simple pick-and-place operations or as complex coordinations between multiple robotic agents. Nonetheless, at either end of the complexity scale, the decision-making requires to perform interactions requires an a priori level of situational awareness. Situational awareness encapsulates the ability to perceive, understand and predict elements within a given environment to make informed decisions. A key belief required to facilitate object interactions is to first detect the object. Detection, in this sense, amounts to determining (i) where an object is and (ii) what an object is. This detection takes place at the perception and comprehension stages of situational awareness and is often facilitated via the interpretation of dense 3D point cloud measurements. This Special Issue requests papers that address problems related to object detection via point cloud data, as well as the limitations of existing approaches.

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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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