Best Practice in Simultaneous Localization and Mapping (SLAM)

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Deadline for manuscript submissions:
closed (31 March 2022)

Message from the Guest Editors

SLAM algorithms are deployed in different platforms, with increasing levels of accuracy and robustness. Transitioning from controlled lab environments to in-field deployment is challenging, and is made possible via the accumulation of solid expertise on practical aspects with SLAM. The best practices would be beneficial, it is a key enabler to unleash the true potential of robot autonomy. The developments also coincide with in autonomous robots. The availability of localization techniques drives development forward in planning and control domains that when combined form an autonomous agent.

The Special Issue is to invite papers that deal with challenging issues in SLAM. Topics include: Best practice in visual, LiDAR, and radar SLAM; Fault detection and recovery; Tight integration of SLAM algorithms with planning and control systems; Emerging application domains and their inherent challenges; Calibration methods for single and multi-cue SLAM systems; SLAM with non-conventional sensors; Core SLAM aspects (Position tracking; Optimization; Uncertainty estimation (also marginalization); Data association; Loop closing); Learning-based methods to enhance model-based SLAM systems.

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Special Issue

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Message from the Editor-in-Chief

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