

Any-Time Low-Cost Localization For Large Scale Multi-Robot Systems

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Abstract

Localization is an enabling technology, and a prerequisite for a wide range of robotic tasks. To date, the question of how to solve the localization problem in redundant, large-scale multi-robot systems, has hardly been touched upon. This talk will focus on precisely this aspect of multi-robot localization by introducing a novel, fully decentralized algorithm, particularly designed for resource-limited platforms within scalable systems. The presentation will elaborate the details of our method, and demonstrate its utility on a group of real mobile robots. Finally, we will round off our talk by bringing our method into a larger perspective, and discussing its potential as well as its limitations.