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Swarm robotics: Remarks on terminology and classification

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Abstract

© Springer Nature Switzerland AG 2018. Swarm robotics is a fast-growing field of research in recent years. As studies count increases, the terminology requires a revision in order to provide a proper level of unification and precision - even a unique "swarm robotics" term needs to be established. Since there are multiple types of collective robotics approaches and corresponding methodology, swarm robotics field terminology must be explicitly distinguished from others. In this paper, we attempt to compare and refine definitions that had been proposed in previous researches. We demonstrate relations between swarm robotics and concepts of adjacent fields including multi-agent systems, multi-robot systems and sensor networks.

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Keywords

Multi-agent system, Multi-robot system, Robotic group, Sensor network, Swarm robotics

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