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Nota di contenuto	From Swarm Intelligence to Swarm Robotics -- Swarm Robotics: From Sources of Inspiration to Domains of Application -- Communication, Diversity and Learning: Cornerstones of Swarm Behavior -- The SWARM-BOTS Project -- Pheromone Robotics and the Logic of Virtual Pheromones -- Distributed Localization and Mapping with a Robotic Swarm -- The I-SWARM Project: Intelligent Small World Autonomous Robots for Micro-manipulation -- An Overview of Physicomimetics -- Lattice Formation in Mobile Autonomous Sensor Arrays -- Swarming Behavior Using Probabilistic Roadmap Techniques -- Towards Dependable Swarms and a New Discipline of Swarm Engineering -- A Review of Probabilistic Macroscopic Models for Swarm Robotic Systems -- Order by Disordered Action in Swarms.
Sommario/riassunto	Swarm robotics can be defined as the study of how a swarm of relatively simple physically embodied agents can be constructed to

collectively accomplish tasks that are beyond the capabilities of a single one. Unlike other studies on multi-robot systems, swarm robotics emphasizes self-organization and emergence, while keeping in mind the issues of scalability and robustness. These emphases promote the use of relatively simple robots, equipped with localized sensing ability, scalable communication mechanisms, and the exploration of decentralized control strategies. This state-of-the-art survey is the first book devoted to swarm robotics. It is based on the First International Workshop on Swarm Robotics held in Santa Monica, CA, USA in July 2004 as part of SAB 2004.

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