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Titolo	Swarm Intelligence : 13th International Conference, ANTS 2022, Málaga, Spain, November 2–4, 2022, Proceedings / / edited by Marco Dorigo, Heiko Hamann, Manuel López-Ibáñez, José García-Nieto, Andries Engelbrecht, Carlo Pinciroli, Volker Strobelt, Christian Camacho-Villalón
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Collana	Lecture Notes in Computer Science, , 1611-3349 ; ; 13491
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Soggetti	Artificial intelligence Computer engineering Computer networks Computer science Artificial Intelligence Computer Engineering and Networks Theory of Computation
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Includes index.
Nota di contenuto	A Geometry-Sensitive Quorum Sensing Algorithm for the Best-of-N Site Selection Problem -- An Approach Based on Particle Swarm Optimization for Inspection of Spacecraft Hulls by a Swarm of Miniaturized Robots -- Automatic Design of Multi-Objective Particle Swarm Optimizers -- Automatic Extraction of Understandable Controllers from Video Observations of Swarm Behaviors -- Benchmarking Performances of Collective Decision-making Strategies with Respect to Communication Bandwidths in Discrete Collective Estimation -- Best-of-N Collective Decisions on a Hierarchy -- Collective Decision-making for Conflict Resolution in Multi-Agent Pathfinding -- Controlling Robot Swarm Aggregation through a Minority of Informed Robots -- Decentralized Multi-Agent Path Finding in Warehouse Environments for Fleets of Mobile Robots with Limited

Communication Range -- Decomposition and Merging Co-operative Particle Swarm Optimization with Random Grouping -- Dynamic Spatial Guided Multi-Guide Particle Swarm Optimization Algorithm for Many-Objective Optimization -- Extracting Symbolic Models of Collective Behaviors with Graph Neural Networks and Macro-Micro Evolution -- Learning Resilient Swarm Behaviors via Ongoing Evolution -- Mind the Gap! Predictive Flocking of Aerial Robot Swarm in Cluttered Environments -- Moving Mixtures of Active and Passive Elements with Robots That Do Not Compute -- Real-time Coordination of a Foraging Robot Swarm Using Blockchain Smart Contracts -- Robot Swarms Break Decision Deadlocks in Collective Perception through Cross-inhibition -- Self-Organized Chain Formation of Nano-Drones in an Open Space -- The Hidden Benefits of Limited Communication and Slow Sensing in Collective Monitoring of Dynamic Environments -- A Novel Time-of-Flight Range and Bearing Sensor System for Micro Air Vehicle Swarms -- An Adaptive Metric Model for Collective Motion Structures in Dynamic Environments -- An Extension of the iMOACOR Algorithm Based on Layer-Set Selection -- Binary Particle Swarm Optimization for Selective Cell Switch-Off in Ultra-Dense 5G Networks -- Choeur Synthétique: an Art Installation Based on Swarm Robotics -- Component Swarm Optimization using Virtual Forces for Solving Layout Problems -- Constant Bearing Flocking -- Distributed Sorting in Complex Environments -- Effect of Different Communication Affordances on the Emergence of Collaboration Strategies in an Online Multiplayer Game -- Generating and Analyzing Collective Step-climbing Behavior in a Multi-legged Robotic Swarm -- Modeling Immune Search through the Lymphatic Network -- Optimization of a Self-organized Collective Motion in a Robotic Swarm -- Response Threshold Distributions to Improve Best-of-N Decisions in Minimalistic Robot Swarms -- Stability-Guided Particle Swarm Optimization -- Animals Are Not Particles: Towards a Second Generation of 'Hetero-Swarm' Robotics -- Applying PSO to Find Optimal Strategy for 3D Chip Layout Design -- Particle Swarm Optimization Applied to the Direct Aperture Optimization Problem on Radiotherapy -- Search Space Illumination of Robot Swarm Parameters for Trustworthiness.

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#### Sommario/riassunto

This book constitutes the proceedings of the 13th International Conference on Swarm Intelligence, ANTS 2022, held in Málaga, Spain, in November 2022. The 19 full papers presented, together with 14 short papers and 4 extended abstracts were carefully reviewed and selected from 45 submissions. ANTS 2022 contributions are dealing with any aspect of swarm intelligence such as behavioral models of social insects, empirical and theoretical research in swarm intelligence, application of swarm intelligence methods, and much more.

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