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Collana	Theoretical Computer Science and General Issues, , 2512-2029 ; ; 7461
Disciplina	006.3
Soggetti	Artificial intelligence Algorithms Computer science Application software Image processing—Digital techniques Computer vision Artificial Intelligence Theory of Computation Computer and Information Systems Applications Computer Imaging, Vision, Pattern Recognition and Graphics
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Nota di bibliografia	Includes bibliographical references and author index.
Nota di contenuto	A Particle Swarm Embedding Algorithm for Nonlinear Dimensionality -- ABC-Miner: An Ant-Based Bayesian Classification Algorithm -- Analysing Robot Swarm Decision-Making with Bio-PEPA -- Automatic Generation of Multi-objective ACO Algorithms for the Bi-objective Knapsack -- Bare Bones Particle Swarms with Jumps -- Hybrid Algorithms for the Minimum-Weight Rooted Arborescence Problem -- Improving the cAnt-MinerPB Classification Algorithm -- Introducing Novelty Search in Evolutionary Swarm Robotics -- Measuring Diversity in the Cooperative Particle Swarm Optimizer -- Multi-armed Bandit Formulation of the Task Partitioning Problem in Swarm Robotics --

Scalability Study of Particle Swarm Optimizers in Dynamic Environments -- Self-reconfigurable Modular e-pucks -- Task Partitioning via Ant Colony Optimization for Distributed Assembly -- The Self-adaptive Comprehensive Learning Particle Swarm Optimizer -- Towards Swarm Calculus: Universal Properties of Swarm Performance and Collective Decisions -- A Hybrid Particle Swarm Optimization Algorithm for the Open Vehicle Routing Problem -- A Self-adaptive Heterogeneous PSO Inspired by Ants -- A“Thermodynamic”Approach to Multi-robot Cooperative Localization with Noisy Sensors -- AcoSeeD: An Ant Colony Optimization for Finding Optimal Spaced Seeds in Biological Sequence Search -- Analysis of Ant-Based Routing with Wireless Medium Access Control -- Ant-Based Approaches for Solving Autocorrelation Problems -- Collision-Induced “Priority Rule” Governs Efficiency of Pheromone-Communicating Swarm Robots -- Dynamic Load Balancing Inspired by Cemetery Formation in Ant Colonies -- Feasibility of an Ant Colony Optimization Algorithm for Multi-leaf Collimator (MLC) Aperture Definition and Beam Weighting in Volumetric Modulated Arc Therapy (VMAT) Radiotherapy Treatment Planning -- Ant Swarm Foraging from Physical to Virtual and Back Again -- Improving Peer Review with ACORN: ACO Algorithm for Reviewer’s Network -- Learning Finite-State Machines with Ant Colony Optimization -- Mobbing Behavior and Deceit and Its Role in Bio-inspired Autonomous Robotic Agents -- Performance of Bacterial Foraging Optimization in Dynamic Environments -- Piecewise Linear Approximation of n-Dimensional Parametric Curves Using Particle Swarms -- Probabilistic Stochastic Diffusion Search -- Self-organized Clustering of Square Objects by Multiple Robots -- Self-reproduction versus Transition Rules in Ant Colonies for Medical Volume Segmentation -- Swarm Interpolation Using an Approximate Chebyshev Distribution -- Using MOPSO to Solve Multiobjective Bilevel Linear Problems -- Clustering Moodle Data via Ant Colony Optimization -- Continuous Trait-Based Particle Swarm Optimisation (CTB-PSO) -- Exploring Different Functions for Heuristics, Discretization, and Rule Quality Evaluation in Ant-Miner -- Fuzzy-Based Aggregation with a Mobile Robot Swarm -- Maturity of the Particle Swarm as a Metric for Measuring the Particle Swarm Intelligence -- Multi-objective Firefly Algorithm for Energy Optimization in Grid Environments -- Particle Swarm Optimization with Random Sampling in Variable Neighbourhoods for Solving Global Minimization Problems.

Sommario/riassunto

This book constitutes the proceedings of the 8th International Conference on Swarm Intelligence, held in Brussels, Belgium, in September 2012. This volume contains 15 full papers, 20 short papers, and 7 extended abstracts carefully selected out of 81 submissions. The papers cover various topics of swarm intelligence.