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Titolo	Evolutionary Multi-Criterion Optimization [[electronic resource]] : 5th International Conference, EMO 2009, Nantes, France, April 7-10, 2009, Proceedings / / edited by Carlos M. Fonseca, Xavier Gandibleux, Jin-Kao Hao, Marc Sevaux
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Descrizione fisica	1 online resource (XV, 586 p.)
Collana	Theoretical Computer Science and General Issues, , 2512-2029 ; ; 5467
Disciplina	005.11
Soggetti	Computer programming Computer science Artificial intelligence Algorithms Numerical analysis Programming Techniques Theory of Computation Artificial Intelligence Numerical Analysis
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	International conference proceedings.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Invited Talks -- Scatter Search and Path Relinking -- Ant Colony Optimization -- Constraint Programming -- Discrete Multiobjective Optimization -- Preference Models Used in Multiple Criteria Decision Making: Foundations and Assessment -- Theoretical Analysis -- Approximating the Least Hypervolume Contributor: NP-Hard in General, But Fast in Practice -- Effects of 1-Greedy -Metric-Selection on Innumerably Large Pareto Fronts -- Uncertainty and Noise -- Noisy Multiobjective Optimization on a Budget of 250 Evaluations -- On Uncertainty and Robustness in Evolutionary Optimization-Based MCDM -- Algorithm Development -- Feedback-Control Operators for Evolutionary Multiobjective Optimization -- A Diversity Management Operator for Evolutionary Many-Objective Optimisation -- Enhancing

Decision Space Diversity in Evolutionary Multiobjective Algorithms -- Solving Bilevel Multi-Objective Optimization Problems Using Evolutionary Algorithms -- Application of MOGA Search Strategy to SVM Training Data Selection -- On Using Populations of Sets in Multiobjective Optimization -- Recombination for Learning Strategy Parameters in the MO-CMA-ES -- Performance Analysis and Comparison -- Multi-Objective Optimisation Problems: A Symbolic Algorithm for Performance Measurement of Evolutionary Computing Techniques -- On the Effect of the Steady-State Selection Scheme in Multi-Objective Genetic Algorithms -- OCD: Online Convergence Detection for Evolutionary Multi-Objective Algorithms Based on Statistical Testing -- Spread Assessment for Evolutionary Multi-Objective Optimization -- An Improved Version of Volume Dominance for Multi-Objective Optimisation -- Applications -- Solving Bi-objective Many-Constraint Bin Packing Problems in Automobile Sheet Metal Forming Processes -- Robust Design of Noise Attenuation Barriers with Evolutionary Multiobjective Algorithms and the Boundary Element Method -- Bi-objective Optimization for the Vehicle Routing Problem with Time Windows: Using Route Similarity to Enhance Performance -- Multi-criteria Curriculum-Based Course Timetabling—A Comparison of a Weighted Sum and a Reference Point Based Approach -- Optimizing the DFCN Broadcast Protocol with a Parallel Cooperative Strategy of Multi-Objective Evolutionary Algorithms -- Evolutionary Multiobjective Optimization for Dynamic Hospital Resource Management -- Multiobjective Decomposition of Positive Integer Matrix: Application to Radiotherapy -- MCDM Track -- Comparison of MCDM and EMO Approaches in Wastewater Treatment Plan Design -- A Trapezoidal Fuzzy Numbers-Based Approach for Aggregating Group Preferences and Ranking Decision Alternatives in MCDM -- Multicriteria Relational Clustering: The Case of Binary Outranking Matrices -- Towards the Early Diagnosis of Alzheimer's Disease via a Multicriteria Classification Model -- Many Objectives -- Many-Objective Optimization by Space Partitioning and Adaptive ϵ -Ranking on MNK-Landscapes -- Online Objective Reduction to Deal with Many-Objective Problems -- Adaptation of Scalarizing Functions in MOEA/D: An Adaptive Scalarizing Function-Based Multiobjective Evolutionary Algorithm -- Combining Aggregation with Pareto Optimization: A Case Study in Evolutionary Molecular Design -- Many-Objective Optimization for Knapsack Problems Using Correlation-Based Weighted Sum Approach -- Alternative Methods -- An Elitist GRASP Metaheuristic for the Multi-objective Quadratic Assignment Problem -- Multi-Objective Particle Swarm Optimizers: An Experimental Comparison -- Adapting to the Habitat: On the Integration of Local Search into the Predator-Prey Model -- EMO and MCDA -- Multiobjective Distinct Candidates Optimization (MODCO): A Cluster-Forming Differential Evolution Algorithm -- An Evolutionary Algorithm to Estimate the Nadir Point in MOLP -- Interactive Evolutionary Multiobjective Optimization Using Robust Ordinal Regression -- A Hybrid Integrated Multi-Objective Optimization Procedure for Estimating Nadir Point.

Sommario/riassunto

This book constitutes the refereed proceedings of the 5th International Conference on Evolutionary Multi-Criterion Optimization, EMO 2009, held in Nantes, France in April 2009. The 39 revised full papers presented together with 5 invited talks were carefully reviewed and selected from 72 submissions. The papers are organized in topical sections on theoretical analysis, uncertainty and noise, algorithm development, performance analysis and comparison, applications, MCDM Track, Many objectives, alternative methods, as well as EMO and MCDA.

