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Disciplina	005.1
Soggetti	Mathematical optimization Computer science Algorithms Numerical analysis Computer science - Mathematics Discrete mathematics Optimization Theory of Computation Numerical Analysis Discrete Mathematics in Computer Science Discrete Mathematics
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Nota di bibliografia	Includes bibliographical references at the end of each chapters and index.
Nota di contenuto	EvoCOP Contributions -- Mutation Multiplicity in a Panmictic Two-Strategy Genetic Algorithm -- Solving the Vehicle Routing Problem by Using Cellular Genetic Algorithms -- Landscape Regularity and Random Walks for the Job-Shop Scheduling Problem -- A Comparison of Adaptive Operator Scheduling Methods on the Traveling Salesman Problem -- AntPacking – An Ant Colony Optimization Approach for the One-Dimensional Bin Packing Problem -- Scatter Search and Memetic

Approaches to the Error Correcting Code Problem -- A Hybrid Evolutionary Algorithm for Solving the Register Allocation Problem -- Parallel Ant Systems for the Capacitated Vehicle Routing Problem -- A Hierarchical Social Metaheuristic for the Max-Cut Problem -- On the Structure of Sequential Search: Beyond "No Free Lunch" -- Dealing with Solution Diversity in an EA for Multiple Objective Decision Support -- A Case Study -- A Study into Ant Colony Optimisation, Evolutionary Computation and Constraint Programming on Binary Constraint Satisfaction Problems -- Binary Merge Model Representation of the Graph Colouring Problem -- Hardness Prediction for the University Course Timetabling Problem -- Hybrid Estimation of Distribution Algorithm for Multiobjective Knapsack Problem -- On the Use of Path Relinking for the ? – Hub Median Problem -- Solving a Real-World Glass Cutting Problem -- Designing Reliable Communication Networks with a Genetic Algorithm Using a Repair Heuristic -- Improving Vehicle Routing Using a Customer Waiting Time Colony -- New Benchmark Instances for the QAP and the Experimental Analysis of Algorithms -- Improving Edge Recombination through Alternate Inheritance and Greedy Manner -- Clustering Nominal and Numerical Data: A New Distance Concept for a Hybrid Genetic Algorithm -- On Search Space Symmetry in Partitioning Problems.

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### Sommario/riassunto

Evolutionary Computation (EC) involves the study of problem solving and optimization techniques inspired by principles of natural evolution and genetics. EC has been able to draw the attention of an increasing number of researchers and practitioners in several fields. Evolutionary algorithms have in particular been shown to be effective for difficult combinatorial optimization problems appearing in various industrial, economic, and scientific domains. This volume contains the proceedings of EvoCOP 2004, the 4th European Conference on Evolutionary Computation in Combinatorial Optimization. It was held in Coimbra, Portugal, on April 5–7, 2004, jointly with EuroGP 2004, the 7th European Conference on Genetic Programming, and EvoWorkshops 2004, which consisted of the following six individual workshops: EvoBIO, the 2nd European Workshop on Evolutionary Bioinformatics; EvoCOMNET, the 1st European Workshop on Evolutionary Computation in Communications, Networks, and Connected Systems; EvoHOT, the 1st European Workshop on Hardware Optimisation; EvoIASP, the 6th European Workshop on Evolutionary Computation in Image Analysis and Signal Processing; EvoMUSART, the 2nd European Workshop on Evolutionary Music and Art; and EvoSTOC, the 1st European Workshop on Evolutionary Algorithms in Stochastic and Dynamic Environments.

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