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Nota di contenuto	Finding Optimal Discretization Orders for Molecular Distance Geometry by Answer Set Programming -- Estimation of Edge Infection Probabilities in the Inverse Infection Problem -- On a Quantum Algorithm for the Resolution of Systems of Linear Equations -- Synthesis of Self-Adaptive Supervisors of Multi-Task Real-Time Object-Oriented Systems Using Developmental Genetic Programming -- Direct Shooting Method for Optimal Control of the Highly Nonlinear Differential-Algebraic Systems -- A Review on the Direct and Indirect Methods for Solving Optimal Control Problems with Differential-Algebraic Constraints -- InterCriteria Analysis of ACO and GA Hybrid Algorithms -- A Two-Stage Look-Ahead Heuristic for Packing Spheres into a Three-Dimensional Bin of Minimum Length -- Handling Lower Bound and Hill-Climbing Strategies for Sphere Packing Problems -- Multi-Objective Meta-Evolution Method for Large-Scale Optimization Problems -- Dispersive Flies Optimisation and Medical Imaging -- An

Efficient Solution of the Resource Constrained Project Scheduling Problem Based on an Adaptation of the Developmental Genetic Programming -- Bayesian-Based Approach to Application of the Genetic Algorithm to Localize the Abrupt Atmospheric Contamination Source.

Sommario/riassunto

This volume is a comprehensive collection of extended contributions from the Workshop on Computational Optimization 2014, held at Warsaw, Poland, September 7-10, 2014. The book presents recent advances in computational optimization. The volume includes important real problems like parameter settings for controlling processes in bioreactor and other processes, resource constrained project scheduling, infection distribution, molecule distance geometry, quantum computing, real-time management and optimal control, bin packing, medical image processing, localization the abrupt atmospheric contamination source and so on. It shows how to develop algorithms for them based on new metaheuristic methods like evolutionary computation, ant colony optimization, constrain programming and others. This research demonstrates how some real-world problems arising in engineering, economics, medicine and other domains can be formulated as optimization tasks.
