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Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	The Importance of Being Careful -- The Importance of Being Careful -- Designing and Tuning SLS Through Animation and Graphics: An Extended Walk-Through -- Implementation Effort and Performance -- Tuning the Performance of the MMAS Heuristic -- Comparing Variants of MMAS ACO Algorithms on Pseudo-Boolean Functions -- EasyAnalyzer: An Object-Oriented Framework for the Experimental

Analysis of Stochastic Local Search Algorithms -- Mixed Models for the Analysis of Local Search Components -- An Algorithm Portfolio for the Sub-graph Isomorphism Problem -- A Path Relinking Approach for the Multi-Resource Generalized Quadratic Assignment Problem -- A Practical Solution Using Simulated Annealing for General Routing Problems with Nodes, Edges, and Arcs -- Probabilistic Beam Search for the Longest Common Subsequence Problem -- A Bidirectional Greedy Heuristic for the Subspace Selection Problem -- Short Papers -- EasySyn++: A Tool for Automatic Synthesis of Stochastic Local Search Algorithms -- Human-Guided Enhancement of a Stochastic Local Search: Visualization and Adjustment of 3D Pheromone -- Solving a Bi-objective Vehicle Routing Problem by Pareto-Ant Colony Optimization -- A Set Covering Approach for the Pickup and Delivery Problem with General Constraints on Each Route -- A Study of Neighborhood Structures for the Multiple Depot Vehicle Scheduling Problem -- Local Search in Complex Scheduling Problems -- A Multi-sphere Scheme for 2D and 3D Packing Problems -- Formulation Space Search for Circle Packing Problems -- Simple Metaheuristics Using the Simplex Algorithm for Non-linear Programming.

Sommario/riassunto

Stochastic local search (SLS) algorithms enjoy great popularity as powerful and versatile tools for tackling computationally hard decision and optimization pr- lems from many areas of computer science, operations research, and engineering. To a large degree, this popularity is based on the conceptual simplicity of many SLS methods and on their excellent performance on a wide gamut of problems, ranging from rather abstract problems of high academic interest to the very s- ci?c problems encountered in many real-world applications. SLS methods range from quite simple construction procedures and iterative improvement algorithms to more complex general-purpose schemes, also widely known as metaheuristics, such as ant colony optimization, evolutionary computation, iterated local search, memetic algorithms, simulated annealing, tabu search and variable neighborhood search. Historically, the development of e?ective SLS algorithms has been guided to a large extent by experience and intuition, and overall resembled more an art than a science. However, in recent years it has become evident that at the core of this development task there is a highly complex engineering process, which combines various aspects of algorithm design with empirical analysis techniques and problem-speci?c background, and which relies heavily on knowledge from a number of disciplines and areas, including computer science, operations research, arti?cial intelligence, and statistics. This development process needs to be - sisted by a sound methodology that addresses the issues arising in the various phases of algorithm design, implementation, tuning, and experimental eval- tion.