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Nota di bibliografia	Includes bibliographical references at the end of each chapters and index.
Nota di contenuto	No Free Lunch Theorems: Limitations and Perspectives of Metaheuristics -- Convergence Rates of Evolutionary Algorithms and Parallel Evolutionary Algorithms -- Rugged and Elementary Landscapes -- Single-Funnel and Multi-funnel Landscapes and Subthreshold Seeking Behavior -- Black-Box Complexity for Bounding the Performance of Randomized Search Heuristics -- Designing an Optimal Search Algorithm with Respect to Prior Information -- The Bayesian Search Game -- Principled Design of Continuous Stochastic Search: From Theory to Practice -- Parsimony Pressure Made Easy: Solving the Problem of Bloat in GP -- Experimental Analysis of Optimization Algorithms: Tuning and Beyond -- Formal Search Algorithms + Problem Characterizations = Executable Search Strategies.
Sommario/riassunto	Metaheuristics, and evolutionary algorithms in particular, are known to provide efficient, adaptable solutions for many real-world problems, but the often informal way in which they are defined and applied has led to misconceptions, and even successful applications are sometimes the outcome of trial and error. Ideally, theoretical studies should explain when and why metaheuristics work, but the challenge is huge: mathematical analysis requires significant effort even for simple scenarios and real-life problems are usually quite complex. In this

book the editors establish a bridge between theory and practice, presenting principled methods that incorporate problem knowledge in evolutionary algorithms and other metaheuristics. The book consists of 11 chapters dealing with the following topics: theoretical results that show what is not possible, an assessment of unsuccessful lines of empirical research; methods for rigorously defining the appropriate scope of problems while acknowledging the compromise between the class of problems to which a search algorithm is applied and its overall expected performance; the top-down principled design of search algorithms, in particular showing that it is possible to design algorithms that are provably good for some rigorously defined classes; and, finally, principled practice, that is reasoned and systematic approaches to setting up experiments, metaheuristic adaptation to specific problems, and setting parameters. With contributions by some of the leading researchers in this domain, this book will be of significant value to scientists, practitioners, and graduate students in the areas of evolutionary computing, metaheuristics, and computational intelligence.