Record Nr. UNINA9911034939503321 Autore Martí Rafael Titolo Handbook of Heuristics / / edited by Rafael Martí, Panos M. Pardalos, Mauricio G.C. Resende Cham:,: Springer Nature Switzerland:,: Imprint: Springer,, 2025 Pubbl/distr/stampa **ISBN** 3-032-00385-7 Edizione [2nd ed. 2025.] Descrizione fisica 1 online resource (0 pages) Collana Mathematics and Statistics Series Altri autori (Persone) PardalosPanos M ResendeMauricio G. C Disciplina 518.1 Soggetti Algorithms Mathematical optimization Mathematical analysis Engineering mathematics Engineering - Data processing Computer science - Mathematics Computer software Optimization **Analysis** Mathematical and Computational Engineering Applications Mathematical Applications in Computer Science Mathematical Software Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Adaptive and Multi-Level Metaheuristics -- Biased Random-Key Genetic Nota di contenuto Programming -- Data Mining in Heuristics -- Deep Learning in Search Heuristics -- Evolution Strategies -- Evolutionary Algorithms --Innovative Applications of Metaheuristics to Supervised Machine Learning -- Matheuristics by Examples -- Multi-start Methods --Multiobjective Optimization -- Quantum-Inspired Heuristics -- Restart Strategies -- Simheuristics -- The Hybrid Metaheuristic CMSA --Constraint-Based Local Search -- Guided Local Search -- Theory of Local Search.

The handbook of heuristics consists of five main parts: search

Sommario/riassunto

strategies, local search, metaheuristics, analysis and implementations, and applications. They cover from search methods and methodological aspects, such as matheuristics, the exciting field in which mathematical programming is combined with heuristics, to applications that provide the practitioner with a description of some relevant optimization issues in a number of specific application areas, such as scheduling, vehicle routing, or network optimization. The first edition of the Handbook of Heuristics was published in 2018 and contained 47 chapters. In this second edition, the authors revised 30 of them to include new developments in the area that appeared in the last few years. In particular, the reader may find 14 chapters in search strategies, including a new chapter on deep learning, 4 in local search, 14 in metaheuristics, 5 in analysis and implementations, and 24 in applications. The inclusion of 14 new chapters makes this second edition even more comprehensive, totaling 61 chapters.