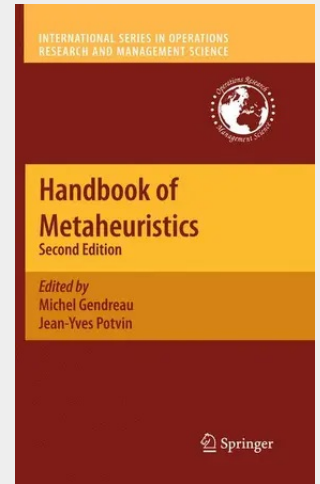


Handbook of Metaheuristics

The first edition of the Handbook of Metaheuristics was published in 2003 under the editorship of Fred Glover and Gary A. Kochenberger. Given the numerous developments observed in the field of metaheuristics in recent years, it appeared that the time was ripe for a second edition of the Handbook. For different reasons, Fred and Gary were unable to accept Springer's invitation to prepare this second edition and they suggested that we should take over the editorship responsibility of the Handbook. We are deeply honored and grateful for their trust. As stated in the first edition, metaheuristics are "solution methods that orchestrate an interaction between local improvement procedures and higher level strategies to create a process capable of escaping from local optima and performing a robust search of a solution space." Although this broad characterization still holds today, many new and exciting developments and extensions have been observed in the last few years. We think in particular to hybrids, which take advantage of the strengths of each of their individual metaheuristic components to better explore the solution space. Hybrids of metaheuristics with other optimization techniques, like branch-and-bound, mathematical programming or constraint programming are also increasingly popular. On the front of applications, metaheuristics are now used to find high-quality solutions to an ever-growing number of complex, ill-defined real-world problems, in particular combinatorial ones.

"... an excellent book if you want to learn about a number of individual metaheuristics." (U. Aickelin, Journal of the Operational Research Society, Issue 56, 2005, on the First Edition) The first edition of the Handbook of Metaheuristics was published in 2003 under the editorship of Fred Glover and Gary A. Kochenberger. Given the numerous developments observed in the field of metaheuristics in recent years, it appeared that the time was ripe for a second edition of the Handbook. When Glover and Kochenberger were unable to prepare this second edition, they suggested that Michel Gendreau and Jean-Yves Potvin should take over the editorship, and so this important new edition is now available. Through its 21 chapters, this second edition is designed to provide a broad coverage of the concepts, implementations and applications in this important field of optimization. Original contributors either revised or updated their work, or provided entirely new chapters. The Handbook now includes updated chapters on the best known metaheuristics, including simulated annealing, tabu search, variable neighborhood search, scatter search and path relinking, genetic algorithms, memetic algorithms, genetic programming, ant colony optimization, multi-start methods, greedy randomized adaptive search procedure, guided local search, hyper-heuristics and parallel metaheuristics. It also contains three new chapters on large neighborhood search, artificial immune systems and hybrid metaheuristics. The last four chapters are devoted to more general issues related to the field of metaheuristics, namely reactive search, stochastic search, fitness landscape analysis and performance comparison.



241,50 €
225,70 € (zzgl. MwSt.)

Nicht mehr lieferbar

Artikelnummer: 9781441916631
Medium: Buch
ISBN: 978-1-4419-1663-1
Verlag: Springer-Verlag New York Inc.
Erscheinungstermin: 30.09.2010
Sprache(n): Englisch
Auflage: 2. Auflage 2010
Serie: International Series in Operations Research & Management Science
Produktform: Gebunden
Gewicht: 1116 g
Seiten: 648
Format (B x H): 159 x 241 mm

