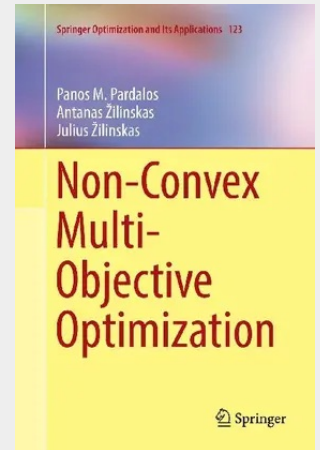


Non-Convex Multi-Objective Optimization

Recent results on non-convex multi-objective optimization problems and methods are presented in this book, with particular attention to expensive black-box objective functions. Multi-objective optimization methods facilitate designers, engineers, and researchers to make decisions on appropriate trade-offs between various conflicting goals. A variety of deterministic and stochastic multi-objective optimization methods are developed in this book. Beginning with basic concepts and a review of non-convex single-objective optimization problems; this book moves on to cover multi-objective branch and bound algorithms, worst-case optimal algorithms (for Lipschitz functions and bi-objective problems), statistical models based algorithms, and probabilistic branch and bound approach. Detailed descriptions of new algorithms for non-convex multi-objective optimization, their theoretical substantiation, and examples for practical applications to the cell formation problem in manufacturing engineering, the process design in chemical engineering, and business process management are included to aide researchers and graduate students in mathematics, computer science, engineering, economics, and business management.

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106,99 €
99,99 € (zzgl. MwSt.)

Lieferfrist: bis zu 10 Tage

Artikelnummer: 9783319869810
Medium: Buch
ISBN: 978-3-319-86981-0
Verlag: Springer
Erscheinungstermin: 15.06.2018
Sprache(n): Englisch
Auflage: Softcover Nachdruck of the original 1. Auflage 2017
Serie: Springer Optimization and Its Applications
Produktform: Kartoniert
Gewicht: 318 g
Seiten: 192
Format (B x H): 155 x 235 mm

