Knust / Brucker
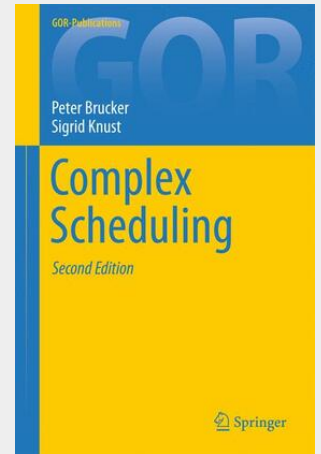
Complex Scheduling

This book presents models and algorithms for complex scheduling problems. Besides resource-constrained project scheduling problems with applications also job-shop problems with flexible machines, transportation or limited buffers are discussed. Discrete optimization methods like linear and integer programming, constraint propagation techniques, shortest path and network flow algorithms, branch-and-bound methods, local search and genetic algorithms, and dynamic programming are presented. They are used in exact or heuristic procedures to solve the introduced complex scheduling problems. Furthermore, methods for calculating lower bounds are described. Most algorithms are formulated in detail and illustrated with examples. In this second edition some errors were corrected, some parts were explained in more detail, and new material has been added. In particular, further generalizations of the RCPSP, additional practical applications and some more algorithms were integrated.

Reihentext: GOR   The German Society of Operations Research - and its members provide numerous significant contributions to Operations Research/Management Science, with respect to both theory and practice. In order to demonstrate the high standards of these contributions and to make them more easily available, in particular to researchers and practitioners from outside the German-speaking countries, GOR has created this book series. It publishes high-quality monographs and collections of papers on all aspects of Operations Research/Management Science, which deal with a single topic of current interest and originate from or are related to the activities of GOR. Back cover copy text: This book presents models and algorithms for complex schedul- ing problems. Besides resource-constrained project scheduling problems with applications also job-shop problems with flexible machines, transportation or limited buffers are discussed. Dis- crete optimization methods like linear and integer program- ming, constraint propagation techniques, shortest path and net- work flow algorithms, branch-and-bound methods, local search and genetic algorithms, and dynamic programming are present- ed. They are used in exact or heuristic procedures to solve the introduced complex scheduling problems. Furthermore, meth- ods for calculating lower bounds are described. Most algorithms are formulated in detail and illustrated with examples. In this second edition some errors were corrected, some parts were explained in more detail, and new material has been added. In particular, further generalizations of the RCPSP, additional practical applications and some more algorithms were integrated.

106,99 €
99,99 € (zzgl. MwSt.)

Lieferfrist: bis zu 10 Tage

Artikelnummer: 9783642239281
Medium: Buch
ISBN: 978-3-642-23928-1
Verlag: Springer
Erscheinungstermin: 29.09.2011
Sprache(n): Englisch
Auflage: 2. Auflage 2012
Serie: GOR-Publications
Produktform: Gebunden
Gewicht: 694 g
Seiten: 342
Format (B x H): 160 x 241 mm