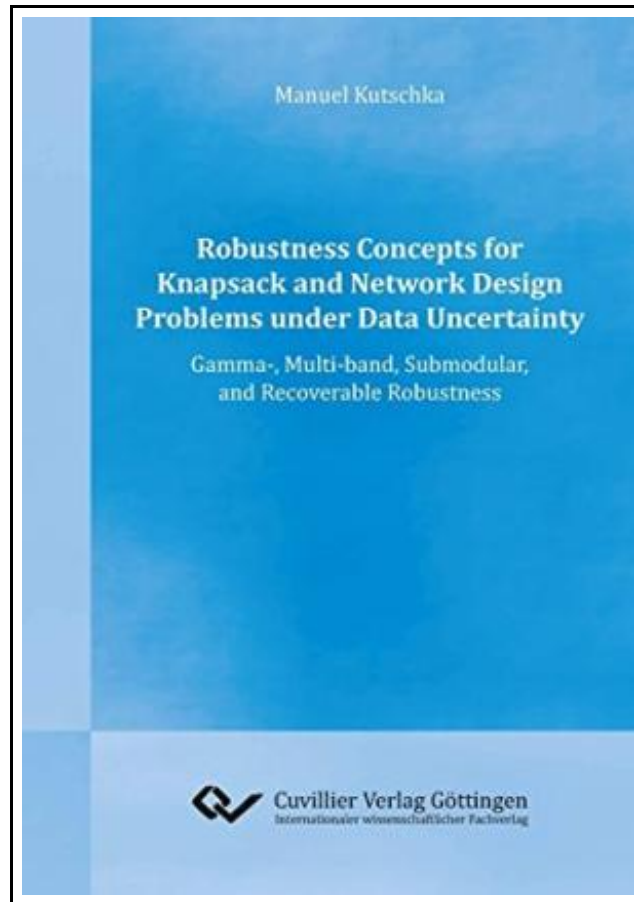


Robustness Concepts for Knapsack and Network Design Problems under Data Uncertainty



Filesize: 8.44 MB

Reviews

Excellent e-book and helpful one. it was writtern really flawlessly and helpful. You will like the way the author compose this pdf.

(Mrs. Lyda Wilkinson Sr.)

ROBUSTNESS CONCEPTS FOR KNAPSACK AND NETWORK DESIGN PROBLEMS UNDER DATA UNCERTAINTY

[DOWNLOAD](#)

To read **Robustness Concepts for Knapsack and Network Design Problems under Data Uncertainty** PDF, you should refer to the web link listed below and save the document or gain access to other information that are in conjunction with ROBUSTNESS CONCEPTS FOR KNAPSACK AND NETWORK DESIGN PROBLEMS UNDER DATA UNCERTAINTY ebook.

Cuvillier Verlag Dez 2013, 2013. Taschenbuch. Book Condition: Neu. 213x149x17 mm. Neuware - This thesis is concerned with mathematical optimization under data uncertainty using mixed integer linear programming (MILP) techniques. Our investigations follow the deterministic paradigm known as robust optimization. It allows to tackle an uncertain variant of a problem without increasing its complexity in theory or decreasing its computational tractability in practice. We consider four robustness concepts for robust optimization and describe their parametrization, application, and evaluation. The concepts are -robustness, its generalization multi-band robustness, the more general submodular robustness, and the two-staged adaptive approach called recoverable robustness. For each concept, we investigate the corresponding robust generalization of the knapsack problem (KP), a fundamental combinatorial problem and subproblem of almost every integer linear programming (ILP) problem, and many other optimization problems. We present ILP formulations, detailed polyhedral investigations including new classes of valid inequalities, and algorithms for each robust KP. In particular, our results for the submodular and recoverable robust KP are novel. Additionally, the recoverable robust KP is experimentally evaluated in detail. Further, we consider the -robust generalization of the capacitated network design problem (NDP). For example, the NDP arises from many application areas such as telecommunications, transportation, or logistics. We present MILP formulations, detailed polyhedral insights with new classes of valid inequalities, and algorithms for the -robustness NDP. Moreover, we consider the multi-band robust NDP, its MILP formulations, and generalized polyhedral results of the -robustness NDP. Finally, we present computational results for the -robustness NDP using real-world measured uncertain data from telecommunication networks. These detailed representative studies are based on our work with the German ROBUKOM project in cooperation with Partner Nokia Siemens Networks GmbH & Co. KG. Die vorliegende Dissertation untersucht mathematische Optimierung unter Unsicherheiten mittels Methoden der gemischt-ganzzahligen linearen Programmierung (MILP). Dabei folgen wir...



[Read Robustness Concepts for Knapsack and Network Design Problems under Data Uncertainty Online](#)



[Download PDF Robustness Concepts for Knapsack and Network Design Problems under Data Uncertainty](#)



[Download ePub Robustness Concepts for Knapsack and Network Design Problems under Data Uncertainty](#)

You May Also Like



[PDF] Psychologisches Testverfahren

Click the link beneath to download and read "Psychologisches Testverfahren" document.

[Read Document »](#)



[PDF] Programming in D

Click the link beneath to download and read "Programming in D" document.

[Read Document »](#)



[PDF] The Java Tutorial (3rd Edition)

Click the link beneath to download and read "The Java Tutorial (3rd Edition)" document.

[Read Document »](#)



[PDF] Music for Children with Hearing Loss: A Resource for Parents and Teachers (Paperback)

Click the link beneath to download and read "Music for Children with Hearing Loss: A Resource for Parents and Teachers (Paperback)" document.

[Read Document »](#)



[PDF] Adobe Indesign CS/Cs2 Breakthroughs

Click the link beneath to download and read "Adobe Indesign CS/Cs2 Breakthroughs" document.

[Read Document »](#)



[PDF] Have You Locked the Castle Gate?

Click the link beneath to download and read "Have You Locked the Castle Gate?" document.

[Read Document »](#)

**[PDF] From Kristallnacht to Israel: A Holocaust Survivor s Journey (Paperback)**

Click the hyperlink beneath to download "From Kristallnacht to Israel: A Holocaust Survivor s Journey (Paperback)" document.

[Read Book »](#)

**[PDF] My Kindle Fire HDX**

Click the hyperlink beneath to download "My Kindle Fire HDX" document.

[Read Book »](#)

**[PDF] Skills for Preschool Teachers, Enhanced Pearson eText - Access Card**

Click the hyperlink beneath to download "Skills for Preschool Teachers, Enhanced Pearson eText - Access Card" document.

[Read Book »](#)

**[PDF] Alice in Wonderland (Paperback)**

Click the hyperlink beneath to download "Alice in Wonderland (Paperback)" document.

[Read Book »](#)

**[PDF] Read Write Inc. Phonics: Purple Set 2 Non-Fiction 4 What is it? (Paperback)**

Click the hyperlink beneath to download "Read Write Inc. Phonics: Purple Set 2 Non-Fiction 4 What is it? (Paperback)" document.

[Read Book »](#)

**[PDF] Who Am I in the Lives of Children? an Introduction to Early Childhood Education, Enhanced Pearson Etext with Loose-Leaf Version -- Access Card Package**

Click the hyperlink beneath to download "Who Am I in the Lives of Children? an Introduction to Early Childhood Education, Enhanced Pearson Etext with Loose-Leaf Version -- Access Card Package" document.

[Read Book »](#)