Scheduling in Supply Chains Using Mixed Integer Programming

Tadeusz Sawik

Scheduling in Supply Chains Using Mixed Integer Programming

Tadeusz Sawik

Scheduling in Supply Chains Using Mixed Integer Programming Tadeusz Sawik
A unified, systematic approach to applying mixed integer programming solutions to integrated scheduling in customer-driven supply chains

Supply chain management is a rapidly developing field, and the recent improvements in modeling, preprocessing, solution algorithms, and mixed integer programming (MIP) software have made it possible to solve large-scale MIP models of scheduling problems, especially integrated scheduling in supply chains. Featuring a unified and systematic presentation, *Scheduling in Supply Chains Using Mixed Integer Programming* provides state-of-the-art MIP modeling and solutions approaches, equipping readers with the knowledge and tools to model and solve real-world supply chain scheduling problems in make-to-order manufacturing.

Drawing upon the author's own research, the book explores MIP approaches and examples-which are modeled on actual supply chain scheduling problems in high-tech industries-in three comprehensive sections:

- **Short-Term Scheduling in Supply Chains** presents various MIP models and provides heuristic algorithms for scheduling flexible flow shops and surface mount technology lines, balancing and scheduling of Flexible Assembly Lines, and loading and scheduling of Flexible Assembly Systems
- **Medium-Term Scheduling in Supply Chains** outlines MIP models and MIP-based heuristic algorithms for supplier selection and order allocation, customer order acceptance and due date setting, material supply scheduling, and medium-term scheduling and rescheduling of customer orders in a make-to-order discrete manufacturing environment
- **Coordinated Scheduling in Supply Chains** explores coordinated scheduling of manufacturing and supply of parts as well as the assembly of products in supply chains with a single producer and single or multiple suppliers; MIP models for a single- or multiple-objective decision making are also provided

Two main decision-making approaches are discussed and compared throughout. The integrated (simultaneous) approach, in which all required decisions are made simultaneously using complex, monolithic MIP models; and the hierarchical (sequential) approach, in which the required decisions are made successively using hierarchies of simpler and smaller-sized MIP models. Throughout the book, the author provides insight on the presented modeling tools using AMPL® modeling language and CPLEX solver.

Scheduling in Supply Chains Using Mixed Integer Programming is a comprehensive resource for practitioners and researchers working in supply chain planning, scheduling, and management. The book is also appropriate for graduate- and PhD-level courses on supply chains for students majoring in management science, industrial engineering, operations research, applied mathematics, and computer science.

Download and Read Free Online Scheduling in Supply Chains Using Mixed Integer Programming Tadeusz Sawik

From reader reviews:

Leona Ferretti:

Spent a free the perfect time to be fun activity to try and do! A lot of people spent their sparetime with their family, or their very own friends. Usually they accomplishing activity like watching television, going to beach, or picnic inside the park. They actually doing same thing every week. Do you feel it? Do you want to something different to fill your personal free time/ holiday? Might be reading a book can be option to fill your no cost time/ holiday. The first thing you ask may be what kinds of reserve that you should read. If you want to try look for book, may be the publication untitled Scheduling in Supply Chains Using Mixed Integer Programming can be good book to read. May be it can be best activity to you.

Gerald Stewart:

Don't be worry for anyone who is afraid that this book will probably filled the space in your house, you might have it in e-book means, more simple and reachable. This Scheduling in Supply Chains Using Mixed Integer Programming can give you a lot of good friends because by you taking a look at this one book you have issue that they don't and make you more like an interesting person. This particular book can be one of one step for you to get success. This e-book offer you information that possibly your friend doesn't recognize, by knowing more than some other make you to be great individuals. So , why hesitate? Let us have Scheduling in Supply Chains Using Mixed Integer Programming.

Michael Davis:

As a college student exactly feel bored to help reading. If their teacher inquired them to go to the library or even make summary for some guide, they are complained. Just small students that has reading's spirit or real their leisure activity. They just do what the professor want, like asked to the library. They go to generally there but nothing reading critically. Any students feel that looking at is not important, boring as well as can't see colorful pictures on there. Yeah, it is to be complicated. Book is very important to suit your needs. As we know that on this period of time, many ways to get whatever we would like. Likewise word says, ways to reach Chinese's country. Therefore , this Scheduling in Supply Chains Using Mixed Integer Programming can make you sense more interested to read.

Augusta Wilson:

Reading a e-book make you to get more knowledge from that. You can take knowledge and information from a book. Book is created or printed or highlighted from each source which filled update of news. With this modern era like at this point, many ways to get information are available for you. From media social like newspaper, magazines, science e-book, encyclopedia, reference book, story and comic. You can add your understanding by that book. Isn't it time to spend your spare time to spread out your book? Or just seeking the Scheduling in Supply Chains Using Mixed Integer Programming when you desired it?

Download and Read Online Scheduling in Supply Chains Using Mixed Integer Programming Tadeusz Sawik #YOXS25VT18I

Read Scheduling in Supply Chains Using Mixed Integer Programming by Tadeusz Sawik for online ebook

Scheduling in Supply Chains Using Mixed Integer Programming by Tadeusz Sawik Free PDF d0wnl0ad, audio books, books to read, good books to read, cheap books, good books, online books, books online, book reviews epub, read books online, books to read online, online library, greatbooks to read, PDF best books to read, top books to read Scheduling in Supply Chains Using Mixed Integer Programming by Tadeusz Sawik books to read online.

Online Scheduling in Supply Chains Using Mixed Integer Programming by Tadeusz Sawik ebook PDF download

Scheduling in Supply Chains Using Mixed Integer Programming by Tadeusz Sawik Doc

Scheduling in Supply Chains Using Mixed Integer Programming by Tadeusz Sawik Mobipocket

Scheduling in Supply Chains Using Mixed Integer Programming by Tadeusz Sawik EPub