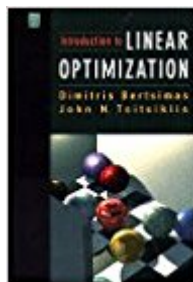The book was found

Introduction To Linear Optimization (Athena Scientific Series In Optimization And Neural Computation, 6)

Synopsis

This book provides a unified, insightful, and modern treatment of linear optimization, that is, linear programming, network flow problems, and discrete optimization. It includes classical topics as well as the state of the art, in both theory and practice.

Book Information

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Customer Reviews

"The true merit of this book, however, lies in its pedagogical qualities which are so impressive..." "Throughout the book, the authors make serious efforts to give geometric and intuitive explanations of various algebraic concepts, and they are widely successful in this effort." "In conclusion, this is an outstanding textbook that presents linear optimization in a truly modern and up-to-date light. One reading of this book is sufficient to appreciate the tremendous amount of quality effort that the authors have put into the writing, and I strongly recommend it to all teachers, researchers and practitioners of mathematical programming." --Motakuri Ramana in Optima, Issue 54Bertsimas and Tsitsiklis have written a comprehensive treatise, offering an easy-to-understand presentation of linear programming and related topics, including network-flow programming and discrete optimization. --Jonathan Bard in Interfaces, Issue 30(4), July 2000

The authors are Professors at the Massachusetts Institute of Technology.

The best part of this book is the first half, where the foundations of linear programming are

presented in a clear yet relatively rigorous fashion, accompanied by numerous intuitive geometrical explanations of the abstract general concepts. This approach, supplementing mathematics with graphical insights, works extremely well for this topic.The quality goes down somewhat, perhaps neccessarily, in the latter half of the book as topics are presented less carefully, and in a somewhat rushed manner in order to cover all of the material the authors decided to include. Given that the fundamentals are covered so well, perhaps this is a fair trade.The only real negative I can think of is that it's a small crime for professors to create their own publishing companies (Athena only publishes works by a small group of MIT professors) and then still charge outrageous amounts for the books. This would be completely unacceptable were it not for the fact that, unlike most self-published work, this book's production quality is on par with that of the large publishers.

This a great text for an introduction to linear programming course. Does a great job proving mathematical rigor to optimization. However the problems are very challenging.

Recommended by a friend who is pursuing his Operation Research PhD degree. Good book!

I cannot find better words to describe this book than simply amazing. It helped me build a deep understanding of linear optimization, from some basic linear algebra skills, through simplex and more modern linear optimization methods, to applications in network flows and integer programming, step by step, proof by proof, so I exactly knew what's going on all the time.I've gave a browse to a couple of other books and internet available courses before finding this one, but they were mostly touching the surface of the subject from a practitioner perspective or assumed a big amount of skills up front. This book allowed me to understand linear optimization deeply without prior preparation.The only disadvantage of this book I can think of is the price.

This is a very good introduction into linear programming, duality and related topics. The authors have managed to write a book that is both pleasant to read and informative. In particular, the geometric interpretations to the problems give very good insights into the structure of problems, and many additional details are available for those who wish to learn more about a specific topic.

This is a well laid out book and easy to read. The author does a good job of explaining all the concepts and providing examples and explanations for things. I also have a math background and love math, so it fits for me, but your mileage may vary.

This book is impressive for theory, every thing you ever wanted to know or how to avoid some other is here. I teach to industrial engineering students, so i have to use other books for the application, but for the theory, everything is covered here, even more, in the book are several simple rules to avoid tipical problems of the simplex method or transportation problems, or integer forms. You can't call yourself a pro if you haven't read this book.

This is a very good introduction to linear programming. I use this a lot for my graduate research and is always the default text when I need to look something up. It only really lacks a discussion on problem reduction- i.e. identifying constraints which are redundant or variables that do not influence the solution which can be removed.But otherwise, it is very well written and provides great insight into how to visualize problems, applications, and building up algorithms (primal and dual simplex, interior point methods) for solving linear programs.

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