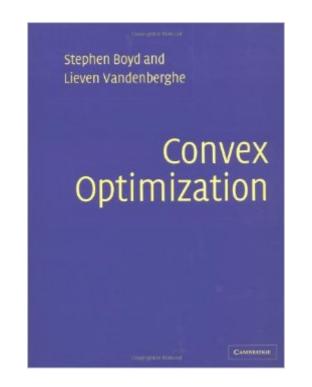


Convex Optimization





Synopsis

Convex optimization problems arise frequently in many different fields. A comprehensive introduction to the subject, this book shows in detail how such problems can be solved numerically with great efficiency. The focus is on recognizing convex optimization problems and then finding the most appropriate technique for solving them. The text contains many worked examples and homework exercises and will appeal to students, researchers and practitioners in fields such as engineering, computer science, mathematics, statistics, finance, and economics.

Book Information

Hardcover: 727 pages Publisher: Cambridge University Press; 1 edition (March 8, 2004) Language: English ISBN-10: 0521833787 ISBN-13: 978-0521833783 Product Dimensions: 7.4 x 1.6 x 9.7 inches Shipping Weight: 3.8 pounds (View shipping rates and policies) Average Customer Review: 4.5 out of 5 stars Â See all reviews (35 customer reviews) Best Sellers Rank: #91,880 in Books (See Top 100 in Books) #3 in Books > Science & Math > Mathematics > Applied > Linear Programming #24 in Books > Science & Math > Mathematics > Reference #265 in Books > Textbooks > Science & Mathematics > Mathematics > Statistics

Customer Reviews

Quite simply, this is a wonderful text. Coupling this with Boyd's course at Stanford (the lecture videos, HWs, etc. are all available for free online), you're bound to learn quite a lot about optimization. But most importantly, you'll have an idea of when you can actually apply convex optimization to solve a problem that comes up in your particular field.My reasoning in giving it such praise is my preference for the rather unusual methodology it takes in introducing you to optimization. Most books I have seen on linear programming or non-linear programming tackle a few standard problems, introduce what is necessary in terms of definitions and proofs, and then focus on the algorithms that solve these standard problems (conjugate gradient et. al.), how they work, their pitfalls, etc. While this is undoubtedly useful material (which Boyd does cover for a good deal in the final chapters), the simple fact of the matter is these algorithms are available as standard methods in optimization packages (which are abstracted from the user), and unless you are actually going into developing, implementing and tweaking algorithms, this quite honestly is useless.What

this book attempts to do, and does very well in my opinion, is to teach you to recognize convexity that's present in problems that are first glance appear to be so incredibly removed from optimization that you might never consider it. This book spends the first 100 pages or so just devoted to building a "calculus" of convexity, if you will, so that you know through what operations convexity is preserved, and you develop intuition as to the potential to use convex optimization in problems in your particular field or application.

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