



# An Easy Path to Convex Analysis and Applications (Synthesis Lectures on Mathematics and Statistics)

By Boris S. Mordukhovich, Nguyen Mau Nam

Download now

Read Online 

**An Easy Path to Convex Analysis and Applications (Synthesis Lectures on Mathematics and Statistics)** By Boris S. Mordukhovich, Nguyen Mau Nam

Convex optimization has an increasing impact on many areas of mathematics, applied sciences, and practical applications. It is now being taught at many universities and being used by researchers of different fields. As convex analysis is the mathematical foundation for convex optimization, having deep knowledge of convex analysis helps students and researchers apply its tools more effectively. The main goal of this book is to provide an easy access to the most fundamental parts of convex analysis and its applications to optimization. Modern techniques of variational analysis are employed to clarify and simplify some basic proofs in convex analysis and build the theory of generalized differentiation for convex functions and sets in finite dimensions. We also present new applications of convex analysis to location problems in connection with many interesting geometric problems such as the Fermat-Torricelli problem, the Heron problem, the Sylvester problem, and their generalizations. Of course, we do not expect to touch every aspect of convex analysis, but the book consists of sufficient material for a first course on this subject. It can also serve as supplemental reading material for a course on convex optimization and applications.

Table of Contents: Preface / Acknowledgments / List of Symbols / Convex Sets and Functions / Subdifferential Calculus / Remarkable Consequences of Convexity / Applications to Optimization and Location Problems / Solutions and Hints for Exercises / Bibliography / Authors' Biographies / Index

 [Download An Easy Path to Convex Analysis and Applications \(...pdf\)](#)

 [Read Online An Easy Path to Convex Analysis and Applications ...pdf](#)

# **An Easy Path to Convex Analysis and Applications (Synthesis Lectures on Mathematics and Statistics)**

*By Boris S. Mordukhovich, Nguyen Mau Nam*

**An Easy Path to Convex Analysis and Applications (Synthesis Lectures on Mathematics and Statistics)**  
By Boris S. Mordukhovich, Nguyen Mau Nam

Convex optimization has an increasing impact on many areas of mathematics, applied sciences, and practical applications. It is now being taught at many universities and being used by researchers of different fields. As convex analysis is the mathematical foundation for convex optimization, having deep knowledge of convex analysis helps students and researchers apply its tools more effectively. The main goal of this book is to provide an easy access to the most fundamental parts of convex analysis and its applications to optimization. Modern techniques of variational analysis are employed to clarify and simplify some basic proofs in convex analysis and build the theory of generalized differentiation for convex functions and sets in finite dimensions. We also present new applications of convex analysis to location problems in connection with many interesting geometric problems such as the Fermat-Torricelli problem, the Heron problem, the Sylvester problem, and their generalizations. Of course, we do not expect to touch every aspect of convex analysis, but the book consists of sufficient material for a first course on this subject. It can also serve as supplemental reading material for a course on convex optimization and applications.

Table of Contents: Preface / Acknowledgments / List of Symbols / Convex Sets and Functions / Subdifferential Calculus / Remarkable Consequences of Convexity / Applications to Optimization and Location Problems / Solutions and Hints for Exercises / Bibliography / Authors' Biographies / Index

**An Easy Path to Convex Analysis and Applications (Synthesis Lectures on Mathematics and Statistics)**  
**By Boris S. Mordukhovich, Nguyen Mau Nam Bibliography**

- Sales Rank: #2026953 in Books
- Published on: 2013-12-01
- Original language: English
- Number of items: 1
- Dimensions: 9.25" h x .50" w x 7.50" l, .85 pounds
- Binding: Paperback
- 218 pages

 [Download An Easy Path to Convex Analysis and Applications \(...pdf](#)

 [Read Online An Easy Path to Convex Analysis and Applications ...pdf](#)

---

## **Download and Read Free Online An Easy Path to Convex Analysis and Applications (Synthesis Lectures on Mathematics and Statistics) By Boris S. Mordukhovich, Nguyen Mau Nam**

---

### **Editorial Review**

About the Author  
Wayne State University

### **Users Review**

#### **From reader reviews:**

##### **David Crockett:**

Have you spare time for any day? What do you do when you have far more or little spare time? Sure, you can choose the suitable activity intended for spend your time. Any person spent their very own spare time to take a stroll, shopping, or went to typically the Mall. How about open or even read a book eligible An Easy Path to Convex Analysis and Applications (Synthesis Lectures on Mathematics and Statistics)? Maybe it is being best activity for you. You understand beside you can spend your time along with your favorite's book, you can better than before. Do you agree with the opinion or you have some other opinion?

##### **Yvonne Casey:**

This book untitled An Easy Path to Convex Analysis and Applications (Synthesis Lectures on Mathematics and Statistics) to be one of several books that will best seller in this year, honestly, that is because when you read this book you can get a lot of benefit on it. You will easily to buy this particular book in the book retailer or you can order it by means of online. The publisher of the book sells the e-book too. It makes you easier to read this book, since you can read this book in your Smart phone. So there is no reason to your account to past this publication from your list.

##### **Pamela Bost:**

Typically the book An Easy Path to Convex Analysis and Applications (Synthesis Lectures on Mathematics and Statistics) will bring someone to the new experience of reading a new book. The author style to clarify the idea is very unique. When you try to find new book to study, this book very suitable to you. The book An Easy Path to Convex Analysis and Applications (Synthesis Lectures on Mathematics and Statistics) is much recommended to you to read. You can also get the e-book in the official web site, so you can quicker to read the book.

##### **Clarence Cavins:**

Publication is one of source of understanding. We can add our knowledge from it. Not only for students and also native or citizen have to have book to know the change information of year to year. As we know those books have many advantages. Beside we add our knowledge, may also bring us to around the world.

Through the book An Easy Path to Convex Analysis and Applications (Synthesis Lectures on Mathematics and Statistics) we can take more advantage. Don't that you be creative people? For being creative person must like to read a book. Merely choose the best book that appropriate with your aim. Don't become doubt to change your life with this book An Easy Path to Convex Analysis and Applications (Synthesis Lectures on Mathematics and Statistics). You can more attractive than now.

**Download and Read Online An Easy Path to Convex Analysis and Applications (Synthesis Lectures on Mathematics and Statistics) By Boris S. Mordukhovich, Nguyen Mau Nam #4UTM0Q7YEP8**

# **Read An Easy Path to Convex Analysis and Applications (Synthesis Lectures on Mathematics and Statistics) By Boris S. Mordukhovich, Nguyen Mau Nam for online ebook**

An Easy Path to Convex Analysis and Applications (Synthesis Lectures on Mathematics and Statistics) By Boris S. Mordukhovich, Nguyen Mau Nam 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 An Easy Path to Convex Analysis and Applications (Synthesis Lectures on Mathematics and Statistics) By Boris S. Mordukhovich, Nguyen Mau Nam books to read online.

## **Online An Easy Path to Convex Analysis and Applications (Synthesis Lectures on Mathematics and Statistics) By Boris S. Mordukhovich, Nguyen Mau Nam ebook PDF download**

**An Easy Path to Convex Analysis and Applications (Synthesis Lectures on Mathematics and Statistics) By Boris S. Mordukhovich, Nguyen Mau Nam Doc**

**An Easy Path to Convex Analysis and Applications (Synthesis Lectures on Mathematics and Statistics) By Boris S. Mordukhovich, Nguyen Mau Nam MobiPocket**

**An Easy Path to Convex Analysis and Applications (Synthesis Lectures on Mathematics and Statistics) By Boris S. Mordukhovich, Nguyen Mau Nam EPub**

**4UTM0Q7YEP8: An Easy Path to Convex Analysis and Applications (Synthesis Lectures on Mathematics and Statistics) By Boris S. Mordukhovich, Nguyen Mau Nam**