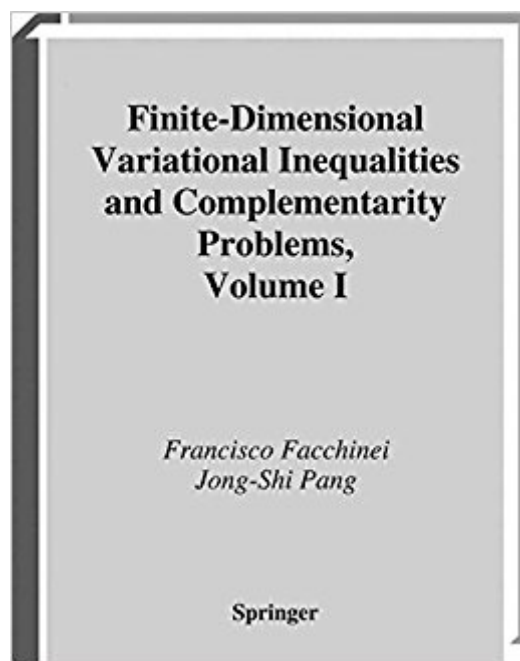The book was found

Finite-Dimensional Variational Inequalities And Complementarity Problems (Springer Series In Operations Research And Financial Engineering)

Finite-Dimensional Variational Inequalities and Complementarity Problems, Volume I

Francisco Facchinei
Jong-Shi Pang

Springer

Synopsis

This is part one of a two-volume work presenting a comprehensive treatment of the finite-dimensional variational inequality and complementarity problem. It covers the basic theory of finite dimensional variational inequalities and complementarity problems. Coverage includes abundant exercises as well as an extensive bibliography. The book will be an enduring reference on the subject and provide the foundation for its sustained growth.

Book Information

Customer Reviews

From the reviews: "The first volume consists of the first six chapters, which present the basic theory of VIs and CPs. ... Besides the main text, each chapter contains (a) an extensive set of exercises Ã¢â ¬Â| and (b) a set of notes and comments that document historical accounts, give the sources for the results in the main text, and provide discussions and references on related topics and extensions. Ã¢â ¬Â| The book is written very well and is an important contribution to the fields of VIs and CPs." (JÃƒÂ rgen Guddat, Zentralblatt MATH, Vol. 1062 (13), 2005) "This Ã¢â ¬Â| monograph presents a comprehensive and state-of-the-art treatment of variational inequalities (VI) in finite dimensions. Ã¢â ¬Â| The presentation is clear, consistent, and essentially self-contained. The book contains a lot of new research material and recent results Ã¢â ¬Â| . The discussion of related literature is a mine both for researchers and new comers Ã¢â ¬Â| . the book is of high value not only for specialists, but for a wide range of readers Ã¢â ¬Â| . It may recommended both for

researchers and advanced students Ã¢â ¬Â¦." (Diethard Klatte, OR-News, March, 2005) "Represents a successful endeavour resulting in a valuable source for researchers, advanced graduates, and for practitioners with an applied mathematics background. It will also well augment a libraryÃ¢â ¬â„¢s section on variational inequalities (VIs) and complementarity problems (CPs). Ã¢â ¬Â¦ merits of the book include the motivation and guideline at the beginning of each chapter, a variety of exercises, further discussion in the form of notes and comments and pointers to the relevant literature at the end of each chapter, and a comprehensive reference list Ã¢â ¬Â¦." (M Hintermueller, Journal of the Operational Research Society, Vol. 55 (9), 2004) "This Ã¢â ¬Â¦ monograph, written for novice and expert researchers and advanced graduate students in a wide range of disciplines, presents a comprehensive, state-of-the-art treatment of the finite-dimensional variational inequality and complementarity problem Ã¢â ¬Â¦. It includes every major aspect of VI/CP Ã¢â ¬Â¦ including novel application domains." (Quarterly of Applied Mathematics, Vol. LXI (3), 2003)

great book.

I bought both volumes (from a different site, at a lower price) -- they have been absolutely indispensable. I heartily recommend them to anyone with a serious interest in the field (and I've been working with related techniques for several decades).Facchinei and Pang are both world-class researchers in this field. Their presentation is quite thorough, yet the overall points are easy to grasp. Knowing how to pose problems is nice, but without solution algorithms, it is useless. Thus, it is very helpful that vol 2 includes many different kinds of algorithms, as well as detailed discussions of their properties.Both volumes definitely require "mathematical maturity." However, mathematical maturity is essential for this material -- whether you intend to implement working algorithms or to appreciate the beauty of these problems and algorithms. The first volume is heavy on theory, while the second concentrates on solution algorithms; I'd definitely get the first if you are interested in the second.The only drawback is that they do not include small problems and solutions.Aside: the 1-star ratings of Volume 1 are astonishing. Comparing the books to the reviews, it's hard to believe they read the book.

I am very familiar with this scholarly book, by far the most useful and comprehensive on the important (although somewhat specialized) subject of variational inequalities. I have found it useful on several occasions, as have many other researchers. I am writing this review because I find unfair

and appalling the two nonfactual and anti-intellectual customer reviews from 2004.One customer, without citing examples, says that "a sampling revealed that a lot of it is false". I am a reasonable expert in the field and have not found anything false so far. Indeed the book is written with great care and high standards of mathematical rigor.The other customer dismisses the book by saying "if you believe this, I have a bridge to sell you". I actually believe almost all he has written, indeed I find it a fairly accurate description of the book!

I borrowed this book(both volumns) from U of Chicago Library and read it carefully. It provides very good information on variational inequalities of different kinds. It's easy to read and follow. I like it so much and that's why I search this book in to buy one for myself.

This comprehensive book presents a rigorous and state-of-the-art treatment of variational inequalities and complementarity problems in finite dimensions. This class of mathematical programming problems provides a powerful framework for the unified analysis and development of efficient solution algorithms for a wide range of equilibrium problems in economics, engineering, finance, and applied sciences. New research material and recent results, not otherwise easily accessible, are presented in a self-contained and consistent manner. The book is published in two volumes, with the first volume concentrating on the basic theory and the second on iterative algorithms. Both volumes contain abundant exercises and feature extensive bibliographies. Written with a wide range of readers in mind, including graduate students and researchers in applied mathematics, optimization, and operations research as well as computational economists and engineers, this book will be an enduring reference on the subject and provide the foundation for its sustained growth.if you believe this, i have a bridge to sell you.

This book contains a lot of information, but a sampling I took revealed that a lot of it is false. Does that say anything about the book? You decide.

Finite-Dimensional Variational Inequalities and Complementarity Problems (Springer Series in Operations Research and Financial Engineering) Numerical Optimization (Springer Series in Operations Research and Financial Engineering) Introduction to Stochastic Programming (Springer Series in Operations Research and Financial Engineering) The Finite Element Method: Linear Static and Dynamic Finite Element Analysis (Dover Civil and Mechanical Engineering) Discovering Biblical Equality: Complementarity Without Hierarchy Prostate Problems Home Remedies, How To Fight

Prostate Problems At Home, Get Rid Of Prostate Problems Fast!: Back On Track - Fighting Prostate Problems At Home $\textrm^*$-Algebras and Finite-Dimensional Approximations (Graduate Studies in Mathematics) Finite-Dimensional Linear Analysis: A Systematic Presentation in Problem Form (Dover Books on Mathematics) Finite-Dimensional Vector Spaces Finite-Dimensional Vector Spaces: Second Edition (Dover Books on Mathematics) Finite Mathematics and Calculus with Applications Plus MyMathLab with Pearson eText -- Access Card Package (10th Edition) (Lial, Greenwell & Ritchey, The Applied Calculus & Finite Math Series) Finite Mathematics Plus MyMathLab with Pearson eText -- Access Card Package (11th Edition) (Lial, Greenwell & Ritchey, The Applied Calculus & Finite Math Series) Mathematics for Finance: An Introduction to Financial Engineering (Springer Undergraduate Mathematics Series) Variational Methods in Image Processing (Chapman & Hall/CRC Mathematical and Computational Imaging Sciences Series) Financial Engineering with Copulas Explained (Financial Engineering Explained) How the Universe Got Its Spots: Diary of a Finite Time in a Finite Space Statistics and Data Analysis for Financial Engineering: with R examples (Springer Texts in Statistics) Mechanics of Structures: Variational and Computational Methods Tensors, Differential Forms, and Variational Principles (Dover Books on Mathematics) Splines and Variational Methods (Dover Books on Mathematics)