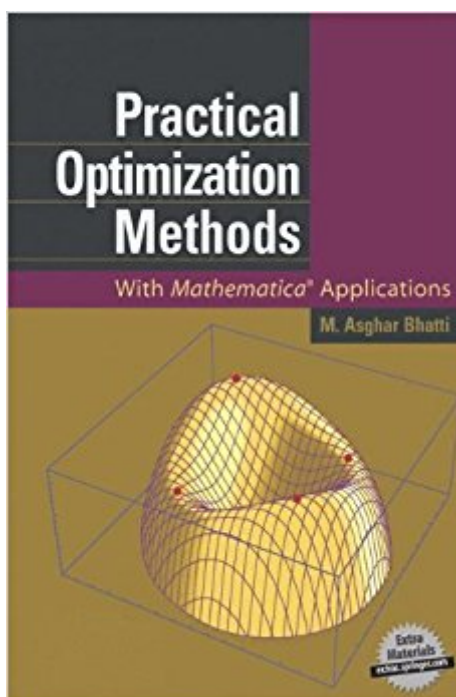


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Practical Optimization Methods: With Mathematica® Applications



Synopsis

This introductory textbook adopts a practical and intuitive approach, rather than emphasizing mathematical rigor. Computationally oriented books in this area generally present algorithms alone, and expect readers to perform computations by hand, and are often written in traditional computer languages, such as Basic, Fortran or Pascal. This book, on the other hand, is the first text to use Mathematica to develop a thorough understanding of optimization algorithms, fully exploiting Mathematica's symbolic, numerical and graphic capabilities.

Book Information

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Customer Reviews

Practical Optimization Methods - M.Asghar Bhatti This is my favorite optimisation book. I recommend it to anyone interested in the application of optimisation techniques, in particular for those in industry. This book has been a constant companion in my optimisation adventure and unlike other books; it has helped me firmly establish a solid foundation and understanding on the various optimisation techniques and the theories behind them. Believe me, I can even read those books which I have shelved in the past because they were complicated with too many cryptic mathematical statements. They don't scare me anymore. Bhatti wisely used Mathematica as the teaching platform and the accompanying OptimizationToolbox software allows one to brush aside the cryptic mathematical statements. The reader can now concentrate on the concepts, relegating the mathematics manipulations to Mathematica and the functions of the OptimisationToolbox. What I like about this book is that it also shows how the Taylor Series, the Quadratic Form and convexity

requirements are put into practice to create an iterative scheme to solve a system of non-linear equations. The OptimisationToolbox and the internal Mathematica functions seamlessly pace the reader through the mathematical preliminaries. By the end of Chapter 3, the reader should now be in a good shape to go to the more serious stuffs. Chapter 4 deals with the subject of optimality conditions starting first with the optimality conditions for unconstrained optimisation problems. These conditions, albeit slightly more involved in computation, are essentially the same as the optimality conditions for single variable functions of the high school days.

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