

<<Nonlinear optimizati>>

图书基本信息

书名：<<Nonlinear optimization with financial applications非线性优化以财政应用>>

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内容概要

The book introduces the key ideas behind practical nonlinear optimization. Computational finance – an increasingly popular area of mathematics degree programs – is combined here with the study of an important class of numerical techniques. The financial content of the book is designed to be relevant and interesting to specialists. However, this material – which occupies about one-third of the text – is also sufficiently accessible to allow the book to be used on optimization courses of a more general nature. The essentials of most currently popular algorithms are described, and their performance is demonstrated on a range of optimization problems arising in financial mathematics. Theoretical convergence properties of methods are stated, and formal proofs are provided in enough cases to be instructive rather than overwhelming. Practical behavior of methods is illustrated by computational examples and discussions of efficiency, accuracy and computational costs. Supporting software for the examples and exercises is available (but the text does not require the reader to use or understand these particular codes). The author has been active in optimization for over thirty years in algorithm development and application and in teaching and research supervision.

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