

## Applied Optimization with MATLAB Programming. 2nd Edition

Description: Technology/Engineering/Mechanical

Provides all the tools needed to begin solving optimization problems using MATLAB®

The Second Edition of Applied Optimization with MATLAB® Programming enables readers to harness all the features of MATLAB® to solve optimization problems using a variety of linear and nonlinear design optimization techniques. By breaking down complex mathematical concepts into simple ideas and offering plenty of easy-to-follow examples, this text is an ideal introduction to the field. Examples come from all engineering disciplines as well as science, economics, operations research, and mathematics, helping readers understand how to apply optimization techniques to solve actual problems.

This Second Edition has been thoroughly revised, incorporating current optimization techniques as well as the improved MATLAB® tools. Two important new features of the text are:

Introduction to the scan and zoom method, providing a simple, effective technique that works for unconstrained, constrained, and global optimization problems

New chapter, Hybrid Mathematics: An Application, using examples to illustrate how optimization can develop analytical or explicit solutions to differential systems and data-fitting problems

Each chapter ends with a set of problems that give readers an opportunity to put their new skills into practice. Almost all of the numerical techniques covered in the text are supported by MATLAB® code, which readers can download on the text's and use to begin solving problems on their own.

This text is recommended for upper-level undergraduate and graduate students in all areas of engineering as well as other disciplines that use optimization techniques to solve design problems.

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