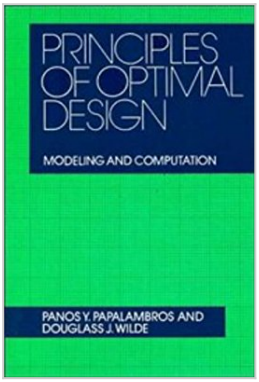

Principles of Optimal Design: Modeling and Computation

By Panos Y. Papalambros, Douglas J. Wilde

Principles of Optimal Design: Modeling and Computation By Panos Y. Papalambros, Douglas J. Wilde

This text discusses modelling for design optimization. It presents a condensed version of classical optimization theory and numerical algorithms, which it integrates with the newer ideas of monotonicity analysis and model boundedness. Careful definition of new concepts and rigorous proof of simple but important principles are followed by immediate applications. It begins with the definition of modelling and the optimization problem and outlines the limitations of this approach. The authors then move on to discuss the important but rarely emphasized concepts of boundedness checking, the idea that the parameters of every model should be verified and simplified; and monotonicity analysis, a method of determining which variables actively constrain a model. Then the discussion turns to the classical theory of differential optimization and hence to powerful numerical optimization techniques. Extensive examples and exercises aid the student and provide practice. A knowledge of differential calculus is helpful.

Principles of Optimal Design: Modeling and Computation

By Panos Y. Papalambros, Douglas J. Wilde

Principles of Optimal Design: Modeling and Computation By Panos Y. Papalambros, Douglas J. Wilde

This text discusses modelling for design optimization. It presents a condensed version of classical optimization theory and numerical algorithms, which it integrates with the newer ideas of monotonicity analysis and model boundedness. Careful definition of new concepts and rigorous proof of simple but important principles are followed by immediate applications. It begins with the definition of modelling and the optimization problem and outlines the limitations of this approach. The authors then move on to discuss the important but rarely emphasized concepts of boundedness checking, the idea that the parameters of every model should be verified and simplified; and monotonicity analysis, a method of determining which variables actively constrain a model. Then the discussion turns to the classical theory of differential optimization and hence to powerful numerical optimization techniques. Extensive examples and exercises aid the student and provide practice. A knowledge of differential calculus is helpful.

Principles of Optimal Design: Modeling and Computation By Panos Y. Papalambros, Douglas J. Wilde Bibliography

- Rank: #4364023 in Books
- Published on: 1991-09-27
- Ingredients: Example Ingredients
- Original language: English
- Number of items: 1
- Dimensions: 9.96" h x .94" w x 6.97" l,
- Binding: Paperback
- 438 pages

Editorial Review

Review
' This is a very well written textbook ... The reviewer would feel very comfortable teaching a course using this as a textbook.' Mathematical Reviews

Users Review

From reader reviews:

Cassie Merritt:

The knowledge that you get from Principles of Optimal Design: Modeling and Computation is the more deep you excavating the information that hide within the words the more you get thinking about reading it. It does not mean that this book is hard to comprehend but Principles of Optimal Design: Modeling and Computation giving you buzz feeling of reading. The article author conveys their point in certain way that can be understood by simply anyone who read this because the author of this publication is well-known enough. That book also makes your vocabulary increase well. It is therefore easy to understand then can go to you, both in printed or e-book style are available. We propose you for having this specific Principles of Optimal Design: Modeling and Computation instantly.

Alma Miranda:

Reading a guide can be one of a lot of action that everyone in the world adores. Do you like reading book so. There are a lot of reasons why people like it. First reading a e-book will give you a lot of new info. When you read a book you will get new information since book is one of numerous ways to share the information as well as their idea. Second, examining a book will make anyone more imaginative. When you reading a book especially hype book the author will bring someone to imagine the story how the people do it anything. Third, you can share your knowledge to others. When you read this Principles of Optimal Design: Modeling and Computation, you may tells your family, friends along with soon about yours reserve. Your knowledge can inspire average, make them reading a book.

Pierre Winter:

Principles of Optimal Design: Modeling and Computation can be one of your nice books that are good idea. All of us recommend that straight away because this e-book has good vocabulary that could increase your knowledge in vocabulary, easy to understand, bit entertaining but nevertheless delivering the information. The copy writer giving his/her effort to place every word into enjoyment arrangement in writing Principles of Optimal Design: Modeling and Computation but doesn't forget the main level, giving the reader the hottest as well as based confirm resource facts that maybe you can be certainly one of it. This great information may drawn you into brand-new stage of crucial pondering.

Judy Yelle:

Book is one of source of information. We can add our expertise from it. Not only for students but in addition native or citizen will need book to know the change information of year for you to year. As we know those textbooks have many advantages. Beside most of us add our knowledge, could also bring us to around the world. By the book Principles of Optimal Design: Modeling and Computation we can consider more advantage. Don't someone to be creative people? For being creative person must choose to read a book. Simply choose the best book that suited with your aim. Don't be doubt to change your life with this book Principles of Optimal Design: Modeling and Computation. You can more pleasing than now.

Read Principles of Optimal Design: Modeling and Computation By Panos Y. Papalambros, Douglas J. Wilde for online ebook

Principles of Optimal Design: Modeling and Computation By Panos Y. Papalambros, Douglas J. Wilde 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 Principles of Optimal Design: Modeling and Computation By Panos Y. Papalambros, Douglas J. Wilde books to read online.

Online Principles of Optimal Design: Modeling and Computation By Panos Y. Papalambros, Douglas J. Wilde ebook PDF download

Principles of Optimal Design: Modeling and Computation By Panos Y. Papalambros, Douglas J. Wilde Doc

Principles of Optimal Design: Modeling and Computation By Panos Y. Papalambros, Douglas J. Wilde Mobipocket

Principles of Optimal Design: Modeling and Computation By Panos Y. Papalambros, Douglas J. Wilde EPub

9XIKW8BFQ0P: Principles of Optimal Design: Modeling and Computation By Panos Y. Papalambros, Douglas J. Wilde