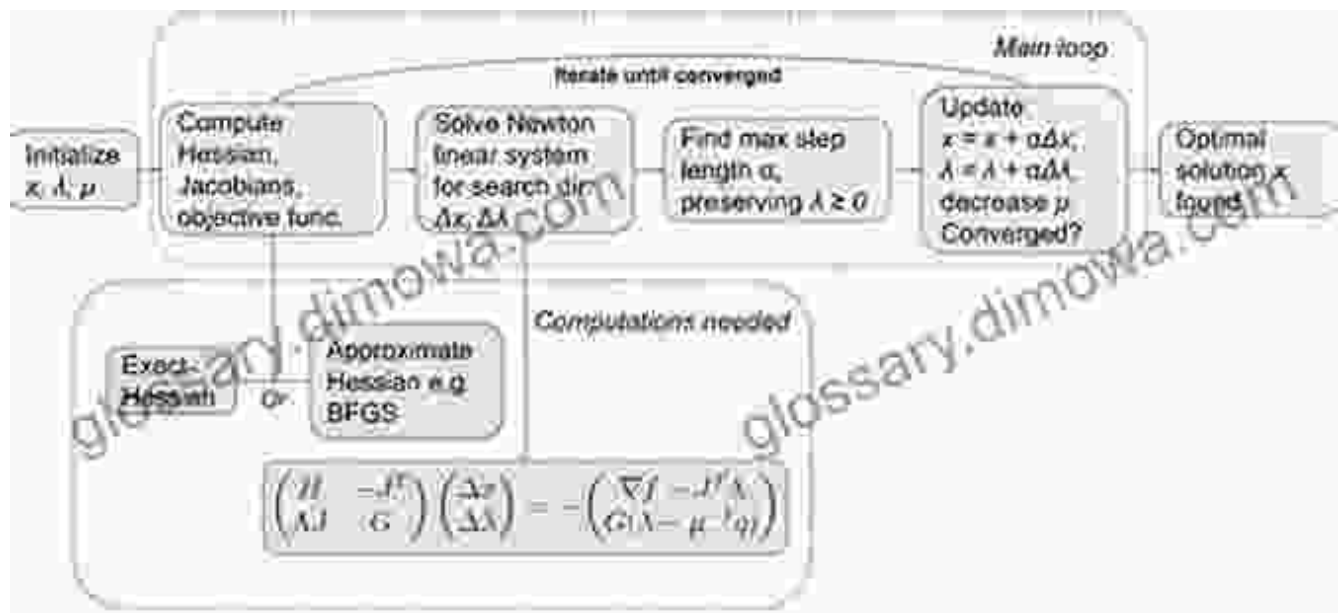# New Paradigm for Primal Dual Interior Point Algorithms

Princeton Series in Applied Mathematics

By Stephen J. Wright, 2019

Self-Regularity: A New Paradigm for Primal-Dual Interior-Point Algorithms (Princeton Series in Applied Mathematics Book 22) by Jiming Peng

★★★★☆ 4.4 out of 5

Language	: English
File size	: 16633 KB
Text-to-Speech	: Enabled
Enhanced typesetting	: Enabled
Screen Reader	: Supported
Print length	: 208 pages

This book presents a comprehensive and up-to-date treatment of primal dual interior point algorithms for linear optimization. This new paradigm for primal dual algorithms overcomes the limitations of traditional primal interior point algorithms and offers a variety of advantages.

The book begins with a review of the theory of linear programming and the classical primal interior point algorithm. It then introduces the new paradigm for primal dual interior point algorithms, which is based on a novel reformulation of the linear programming problem. This reformulation leads to a new set of optimality conditions that are more amenable to efficient numerical solution.

The book discusses the theoretical and computational advantages of the new paradigm for primal dual interior point algorithms. It shows that these algorithms are more robust and efficient than traditional primal interior point algorithms, and that they can be applied to a wider range of linear programming problems.

The book also includes a number of exercises and examples to help readers understand the theory and practice of primal dual interior point algorithms. These exercises and examples are essential for readers who want to apply these algorithms to their own research or practice.

Table of Contents

4. Optimality conditions for primal dual interior point algorithms

5. The path-following primal dual interior point algorithm

6. The potential reduction primal dual interior point algorithm

7. Applications of primal dual interior point algorithms

8. Exercises and examples

Reviews

"This book is a comprehensive and up-to-date treatment of primal dual interior point algorithms for linear optimization. It is written in a clear and concise style, and it is well-organized and well-referenced. The book is essential reading for researchers and practitioners in optimization." - **Michael Todd, Cornell University**

"This book is a major contribution to the literature on interior point methods for linear optimization. It provides a comprehensive and up-to-date treatment of the subject, and it is written in a clear and accessible style. The book is a valuable resource for researchers and practitioners in optimization." - **Yinyu Ye, Stanford University**

Free Download your copy today!

Free Download Now

Self-Regularity: A New Paradigm for Primal-Dual Interior-Point Algorithms (Princeton Series in Applied Mathematics Book 22) by Jiming Peng

⭐⭐⭐⭐☆   4.4 out of 5

Language   : English

File size	: 16633 KB
Text-to-Speech	: Enabled
Enhanced typesetting	: Enabled
Screen Reader	: Supported
Print length	: 208 pages

Younger Ten: Writing the Ten-Minute Play

Unlock the Secrets of Playwriting with Keith Bunin's Debut Book In the vibrant and ever-evolving world of playwriting, Keith Bunin's debut book, "Younger Ten:...

Price Forecasting Models For Asta Funding Inc Asfi Stock Nasdaq Composite

In the ever-evolving landscape of the stock market, the ability to forecast stock prices accurately can provide investors with a significant...