

# Model Predictive Control: Advanced Textbooks in Control and Signal Processing

Model predictive control (MPC) is a powerful control technique that has been widely used in various industrial applications. MPC is based on the idea of predicting the future behavior of a system and using this prediction to calculate the optimal control inputs. This approach allows MPC to handle complex systems with multiple inputs and outputs, and to deal with constraints on the control inputs and system states.



## Model Predictive Control (Advanced Textbooks in Control and Signal Processing) by Derek Durbin

★★★★☆ 4 out of 5

Language : English

File size : 10244 KB

Screen Reader: Supported

Print length : 427 pages

Paperback : 321 pages

Item Weight : 14.9 ounces

Dimensions : 5 x 0.73 x 8 inches



This book provides a comprehensive to MPC, covering both the theoretical foundations and practical applications of this technique. The book is divided into three parts:

\* Part I: to MPC \* Part II: MPC Algorithms \* Part III: Applications of MPC

### Part I: to MPC

Part I of the book provides an overview of MPC, including its history, basic principles, and advantages over other control techniques. This part also discusses the different types of MPC algorithms and their applications.

## **Part II: MPC Algorithms**

Part II of the book presents the detailed algorithms for MPC. This part covers a wide range of MPC algorithms, including:

\* Linear MPC \* Nonlinear MPC \* Constrained MPC \* Robust MPC

Each algorithm is explained in detail, and its advantages and disadvantages are discussed.

## **Part III: Applications of MPC**

Part III of the book provides a number of case studies that illustrate the applications of MPC in various industrial settings. These case studies cover a wide range of applications, including:

\* Process control \* Robotics \* Power systems \* Automotive systems

Each case study provides a detailed description of the MPC system, its performance, and the benefits that were achieved.

This book is a comprehensive to MPC, covering both the theoretical foundations and practical applications of this technique. The book is written in a clear and concise style, and it is illustrated with numerous examples and case studies. This book is an essential resource for anyone who wants to learn more about MPC.

## **About the Authors**

The authors of this book are all leading experts in the field of MPC. They have a wealth of experience in both the theoretical development and practical application of MPC. This book is the culmination of their years of research and experience.

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This book is available for Free Download from Our Book Library.com and other major booksellers. Free Download your copy today and learn how to use MPC to improve the performance of your control systems!



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