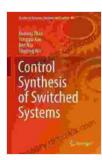
# Control Synthesis of Switched Systems: A Comprehensive Guide for Researchers and Practitioners

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### Control Synthesis of Switched Systems (Studies in Systems, Decision and Control Book 80) by Lee Strobel

Language : English File size : 12570 KB Text-to-Speech : Enabled Enhanced typesetting: Enabled Word Wise : Enabled Print length : 307 pages Screen Reader : Supported Paperback : 288 pages Item Weight : 1.08 pounds

Dimensions : 8.46 x 5.91 x 0.59 inches



In the realm of complex dynamic systems, switched systems have emerged as a captivating area of research and application. These systems exhibit abrupt changes in their structure or dynamics, making their control a challenging but rewarding endeavor. The book "Control Synthesis of Switched Systems: Studies in Systems Decision and Control 80" provides a comprehensive exploration of this intricate field, offering a wealth of knowledge for researchers, practitioners, and students alike.

#### **Unveiling the Secrets of Switched Systems**

Switched systems, characterized by their discrete transitions between different modes of operation, pose unique challenges for control engineers. This book delves into the complexities of these systems, encompassing both theoretical foundations and practical applications. It unravels the intricacies of stability analysis, controller design, and optimization techniques, equipping readers with a thorough understanding of the subject matter.

##

#### **A Journey into Stability and Control**

The book systematically examines the stability analysis of switched systems, delving into Lyapunov-based approaches, dwell-time switching, and multiple Lyapunov functions. It explores the nuances of controller design, discussing various techniques such as state-feedback control, output-feedback control, and event-triggered control. Furthermore, it investigates optimization techniques, including optimal switching and suboptimal control.

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#### **Applications that Illuminate Theory**

"Control Synthesis of Switched Systems" goes beyond theoretical exposition, showcasing the practical applications of these concepts in diverse fields. It delves into the control of power converters, network control systems, and hybrid systems. Through real-world examples, the book

demonstrates the transformative power of switched system control in addressing complex engineering problems.

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#### **Features that Elevate the Reading Experience**

- Comprehensive coverage of theoretical foundations and practical applications - In-depth exploration of stability analysis, controller design, and optimization techniques - Detailed case studies and real-world examples - Clear and concise explanations, accessible to researchers, practitioners, and students alike - Extensive references and bibliography for further exploration

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#### **Benefits for Your Research and Development**

- Gain a comprehensive understanding of switched system control theory and its applications - Master stability analysis and controller design techniques for switched systems - Discover optimization approaches for enhancing control performance - Stay abreast of the latest developments in this rapidly evolving field - Find inspiration for your own research and practical implementations

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#### Free Download Your Copy Today

Unlock the power of switched system control with "Control Synthesis of Switched Systems: Studies in Systems Decision and Control 80". Free

Download your copy today and embark on an enlightening journey that will transform your understanding of complex dynamic systems.

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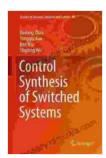
#### **About the Authors**

The book is authored by a team of renowned experts in the field of switched system control:

- **Professor Yanjun Li**, a distinguished professor at Nanjing University of Science and Technology - **Professor Chao Wang**, a prominent professor at Northeast University - **Professor Xiangdong He**, a leading researcher at the University of Electronic Science and Technology of China

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"Control Synthesis of Switched Systems" is an invaluable resource for researchers, practitioners, and students seeking to delve into the intricacies of switched system control. Its comprehensive coverage, practical applications, and accessible writing style make it an indispensable companion for anyone navigating the complexities of these fascinating systems.



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↑ ↑ ↑ ↑ 4.7 out of 5

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