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Sommario/riassunto

This book, 'Sliding-Mode Control and Systems: The State of the Art', is an edited volume that delves into the advanced concepts and methodologies of sliding-mode control (SMC) and variable structure systems (VSS). It discusses the theoretical foundation and practical applications of SMC, highlighting its robustness and efficiency in dealing with uncertain systems. The book is structured into six sections that cover new properties of SMC algorithms, adaptation methods, chattering analysis, and recent developments in VSS theory. It addresses both the advantages and challenges of SMC, such as the chattering phenomenon and the need for adaptation in unknown environments. The book aims to provide comprehensive insights into the design and implementation of SMC systems, making it a valuable resource for researchers, engineers, and practitioners in control systems and related fields.