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   Sommario/riassunto The study of complex dynamic systems has become increasingly important in recent years due to its wide range of applications in fields such as engineering, physics, economics, and biology. These systems are characterized by their interconnectedness, nonlinearities, and feedback loops, which make them difficult to understand and control. As a result, there has been growing interest in developing tools and techniques for the modelling, identification, and control of complex dynamic systems. The aim of this reprint is to provide an overview of the state-of-the-art methods for the modelling, identification, and control of complex dynamic systems. This reprint covers a wide range of topics, including system identification, model-based control, adaptive control, nonlinear control, and predictive control. It also includes case studies and examples from different fields to demonstrate the practical application of these methods. This reprint is intended for researchers, graduate students, and practitioners in the field of control systems. It assumes a basic understanding of linear systems theory, calculus, and linear algebra. Overall, this reprint provides a comprehensive and up-to-date overview of the methods for the modelling, identification, and control of complex dynamic systems.