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	Soggetti	System theory Control theory Multibody systems Vibration Mechanics, Applied Mathematical optimization Calculus of variations Systems Theory, Control Multibody Systems and Mechanical Vibrations Calculus of Variations and Optimization
	Lingua di pubblicazione	Inglese
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	Nota di contenuto	State-Dependent Sampling for Online Control -- Design of First Order Controllers for Unstable Infinite Dimensional Plants -- Anti-Windup Conditioning for Actuator Saturation in Internal Model Control with Delays -- Stabilization of Some Fractional Neutral Delay Systems which Possibly Possess an Infinite Number of Unstable Poles -- Controller Design for a Class of Delayed and Constrained Systems: Application to Supply Chains.
	Sommario/riassunto	This book aims at reviewing recent progress in the direction of algebraic and symbolic computation methods for functional systems, e. g. ODE systems, differential time-delay equations, difference equations and integro-differential equations. In the nineties, modern algebraic theories were introduced in mathematical systems theory and in control theory. Combined with real algebraic geometry, which was previously

introduced in control theory, the past years have seen a flourishing development of algebraic methods in control theory. One of the strengths of algebraic methods lies in their close connections to computations. The use of the above-mentioned algebraic theories in control theory has been an important source of motivation to develop effective versions of these theories (when possible). With the development of computer algebra and computer algebra systems, symbolic methods for control theory have been developed over the past years. The goal of this book is to propose a partial state of the art in this direction. To make recent results more easily accessible to a large audience, the chapters include materials which survey the main mathematical methods and results and which are illustrated with explicit examples.