1.	Record Nr.	UNINA9910760273303321
	Autore	Ben Makhlouf Abdellatif
	Titolo	State Estimation and Stabilization of Nonlinear Systems: Theory and Applications
	Pubbl/distr/stampa	Cham : , : Springer, , 2023 ©2023
	ISBN	9783031379703 3031379705
	Edizione	[1st ed.]
	Descrizione fisica	1 online resource (439 pages)
	Collana	Studies in Systems, Decision and Control Series ; ; v.491
	Altri autori (Persone)	HammamiMohamed Ali NaifarOmar
	Disciplina	629.836
	Soggetti	Nonlinear systems Lyapunov functions
	Lingua di pubblicazione	Inglese
	Formato	Materiale a stampa
	Livello bibliografico	Monografia
	Nota di contenuto	Contents Practical h-Stability of Nonlinear Impulsive Systems: A Survey 1 Introduction 2 Definitions, Notations and Hypotheses 3 Main Results 3.1 Sufficient Conditions for Practical h- stability 4 Practical h-stability of Perturbed and Cascaded System 4.1 Practical h-stability of Perturbed System 4.2 Practical h- stability of Cascaded System 5 Practical h-stabilization 6 Examples References Practical Exponential Stabilization for Semi-Linear Systems in Hilbert Spaces 1 Introduction 2 Preliminaries 3 Main Results 3.1 Exponential Stabilization by Linear State Controller 3.2 Exponential Stabilization by Nonlinear State Controller 4 Examples 5 Conclusion References An Observer Controller for Delay Impulsive Switched Systems 1 Introduction 2 System Description 3 Asymptotic Stability Result 4 Design of Feedback Controller 5 Observer-Based Control Design 5.1 System Under Consideration 5.2 Observer Design 5.3 Observer-Based Control
	Sommario/riassunto	This book discusses the state estimation and stabilization of nonlinear systems, focusing on both theoretical and practical aspects. It aims to provide comprehensive insights into various stability concepts,

particularly practical h-stability, using Lyapunov stability theory. The editors and contributors present new methods and sufficient conditions for ensuring stability in nonlinear impulsive systems, with applications across fields such as engineering, biology, and economics. The book is intended for researchers, practitioners, and students in systems control and related disciplines.