1. Record Nr. UNINA9911009141903321

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Titolo	Control of Singular Fractional Order Systems: LMI Approach : Stability, Stabilization and Admissibility / / by Saliha Marir, Mohammed Chadli
Pubbl/distr/stampa	Cham : , : Springer Nature Switzerland : , : Imprint : Springer, , 2025
ISBN	3-031-87382-3
Edizione	[1st ed. 2025.]
Descrizione fisica	1 online resource (390 pages)
Collana	Studies in Systems, Decision and Control, , 2198-4190 ; ; 292
Altri autori (Persone)	ChadliMohammed
Disciplina	629.8312 003
Soggetti	Automatic control Computational intelligence Control and Systems Theory Computational Intelligence
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Overview on fractional calculus -- H Control for Fractional Order Systems -- Stabilization of Singular Fractional Order Systems -- H Control for Singular Fractional Order Systems -- Appendix -- Index.
Sommario/riassunto	This book provides a comprehensive study of singular fractional-order systems, presenting a novel perspective on their analysis and control. Using the Linear Matrix Inequalities approach, it provides conditions for admissibility, robust admissibility, stabilization, and robust stabilization of fractional singular linear time-invariant systems. The methods discussed address key challenges in stability and robustness, and provide innovative solutions to open problems in fractional-order control theory. Aimed at control scientists, graduate students, and advanced undergraduates, this work bridges theoretical developments and practical applications, making it a valuable resource for understanding and advancing the field of fractional-order systems. It is particularly suitable for those seeking new directions in control systems research or who wish to apply fractional tools to dynamic systems modeling and control. With its unique focus and broad scope, this book serves as an indispensable reference for courses such as "Analysis and Control of Fractional-Order Systems" and "LMI-Based Control of

Singular Fractional-Order Systems".