

1. Record Nr.	UNINA9910483065503321
Autore	Kaczorek T (Tadeusz), <1932->
Titolo	Descriptor Systems of Integer and Fractional Orders / / by Tadeusz Kaczorek, Kamil Borawski
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2021
ISBN	3-030-72480-8
Edizione	[1st ed. 2021.]
Descrizione fisica	1 online resource (xiv, 252 pages) : illustrations
Collana	Studies in Systems, Decision and Control, , 2198-4190 ; ; 367
Disciplina	003.83
Soggetti	Control engineering Dynamics Nonlinear theories Control and Systems Theory Applied Dynamical Systems
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references.
Nota di contenuto	Descriptor Linear Systems -- Fractional Descriptor Linear Systems -- Stability of Positive Descriptor Systems -- Appendix.
Sommario/riassunto	This book covers some selected problems of the descriptor integer and fractional order positive continuous-time and discrete-time systems. The book consists of 3 chapters, 4 appendices and the list of references. Chapter 1 is devoted to descriptor integer order continuous-time and discrete-time linear systems. In Chapter 2, descriptor fractional order continuous-time and discrete-time linear systems are considered. Chapter 3 is devoted to the stability of descriptor continuous-time and discrete-time systems of integer and fractional orders. In Appendix A, extensions of the Cayley–Hamilton theorem for descriptor linear systems are given. Some methods for computation of the Drazin inverse are presented in Appendix B. In Appendix C, some basic definitions and theorems on Laplace transforms and Z-transforms are given. Some properties of the nilpotent matrices are given in Appendix D.