1. Record Nr. UNINA9910483065503321 Autore Kaczorek T (Tadeusz), <1932-> Titolo Descriptor systems of integer and fractional orders / / Tadeusz Kaczorek, Kamil Borawski Pubbl/distr/stampa Cham, Switzerland: ,: Springer, , [2021] ©2021 **ISBN** 3-030-72480-8 1 online resource (xiv, 252 pages): illustrations Descrizione fisica Collana Studies in systems, decision and control; v.367 Disciplina 003.83 Soggetti Discrete-time systems Linear time invariant systems Sistemes de temps discret Sistemes lineals Llibres electrònics Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Includes bibliographical references. Nota di bibliografia Nota di contenuto Descriptor Linear Systems Fractional Descriptor Linear Systems Stability of Positive Descriptor Systems Appendix This book covers some selected problems of the descriptor integer and Sommario/riassunto 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.