Record Nr. UNINA9910682562703321 Autore Chattopadhyay Adhir Baran Titolo Mathematical modeling of physical systems: applications of fields, circuits and signal processing / / Adhir Baran Chattopadhyay, Shazia Hasan, and Snehaunshu Chowdhury Pubbl/distr/stampa Singapore: ,: Springer Nature Singapore Pte Ltd., , [2023] ©2023 **ISBN** 981-19-7558-2 Edizione [1st ed. 2023.] Descrizione fisica 1 online resource (290 pages) Collana Advances in Intelligent Systems and Computing, , 2194-5365;; 1436 Disciplina 530.14 Soggetti Field theory (Physics) Physics - Mathematical models Lingua di pubblicazione Inglese **Formato** Materiale a stampa Monografia Livello bibliografico Nota di bibliografia Includes bibliographical references. Nota di contenuto Introduction -- Mathematical Modelling of Electromagnetic Forces due to Finite Width Effects of a Single sided Linear Induction Motor --Mathematical Modeling of Electromagnetic Forces due to Finite Length and Finite Width Effects of a Single sided Linear Induction Motor --Fluid Flow Representation -- Computational Fluid Dynamics. The book presents mathematical modelling of physical systems by Sommario/riassunto combined approach based on field theory, circuit theory and signal processing. The book is broadly divided into three parts: applications of field theory, applications of circuit theory and applications of signals processing. First part contains six chapters, second part has two chapters and third part contains two chapters. First part is further decoupled into three plus three chapters, based on the common "field nature" exhibited by electromagnetic quantities and fluid quantities.