1. Record Nr. UNINA9910999678103321

Autore	Calixto Wesley Pacheco
Titolo	Control and Tracking Techniques for Switched Reluctance Machines / / by Wesley Pacheco Calixto, Wanderson Rainer Hilário Araújo, Lucas Diniz Silva Morais, Marcio Rodrigues Cunha Reis
Pubbl/distr/stampa	Cham : , : Springer Nature Switzerland : , : Imprint : Springer, , 2025
ISBN	3-031-86727-0
Edizione	[1st ed. 2025.]
Descrizione fisica	1 online resource (XXVIII, 172 p. 144 illus., 122 illus. in color.)
Collana	Power Systems, , 1860-4676
Disciplina	621.46
Soggetti	Electric machinery Power electronics Electric power production Renewable energy sources Electrical Machines Power Electronics Electrical Power Engineering Renewable Energy
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Chapter 1: Brief historical overview of switched reluctance machines -- Chapter 2: Switched reluctance machine -- Chapter 3: Systerm, modeling, simulation and optimization -- Chapter 4: Parametric regression and sensitivity analysis -- Chapter 5: Design and development of the experimental platform -- Chapter 6: Optimization and validation of switched reluctance generator models -- Chapter 7: Applications in control and energy efficiency with switched reluctance motors -- Chapter 8: Applications in control and generation with switched reluctance machines.
Sommario/riassunto	Control and Tracking Techniques for Switched Reluctance Machines provides detailed and practical instructions for implementing drive and control techniques for switched reluctance machines (SRMs), which can be immediately applied in real-world projects. It presents the latest innovations in control techniques for SRMs, which are essential for the efficiency and sustainability of modern electrical systems. The book

includes case studies and practical examples that enhance the understanding of concepts and their application in real scenarios, making the content accessible to both students and experienced professionals. It emphasizes techniques that optimize SRM performance and promote the sustainability of electrical systems, a topic of increasing importance in engineering. With a focus on the current and future needs of the energy sector, this authoritative guide is a key reference for practicing engineers, researchers, and practitioners in the renewable energy industry. Presents the latest innovations in control techniques for switched reluctance machines; Emphasizes techniques and innovation with a focus on sustainability; Offers case studies and a practical approach allowing immediate technology applications in real-world projects.