1. Record Nr. UNINA9910375779303321

Titolo	Proceedings of the 8th ACM SIGPLAN International Conference on Certified Programs and Proofs / / edited by Assia Mahboubi, Magnus O. Myreen
Pubbl/distr/stampa	New York, NY : , : ACM, , 2019 ©2019
Descrizione fisica	1 online resource (261 pages) : illustrations
Disciplina	004.0151
Soggetti	Computer science - Mathematics
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references and index.

2. Record Nr. UNINA9911061850303321

Autore	Yeh Chih-Chun
Titolo	AC Motor Control Loop Design : Practical Modeling, Delay Compensation, and Simulation Techniques Using MATLAB/SIMULINK / / by Chih-Chun Yeh
Pubbl/distr/stampa	Singapore : , : Springer Nature Singapore : , : Imprint : Springer, , 2026
ISBN	981-9532-61-2
Edizione	[1st ed. 2026.]
Descrizione fisica	1 online resource (XIII, 353 p. 313 illus., 200 illus. in color.)
Collana	Power Systems, , 1860-4676
Disciplina	629.8312 003
Soggetti	Automatic control Electric machinery Engineering design Computer simulation Electronic circuit design Control and Systems Theory Electrical Machines Engineering Design Computer Modelling Electronics Design and Verification

Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Space Vector Modeling of AC Machines -- Design of AC Motor Control Loops -- Modulation Strategies for Three-Phase Inverters -- Hardware-Based Design Validation -- Practical Issues in Control Implementation -- A Refresher on Classical Control Theory.
Sommario/riassunto	This book provides a simulation-first, application-oriented approach to digital control design for AC motor systems, focusing on real-world challenges such as delay compensation, stability analysis, and loop tuning. Unlike conventional motor control texts that emphasize only theoretical frameworks, this book offers a systematic, delay-aware modeling and control methodology that engineers can directly apply to hardware. Using MATLAB/SIMULINK as the primary tool, the book demonstrates step-by-step techniques to reduce development cost and risk through accurate simulation before hardware deployment. Practical topics include delay-compensated PI controller design, modulation strategies for three-phase inverters, hardware-based validation using ODrive, and advanced observer techniques for sensorless PMSM control. With downloadable simulation files and case studies, this book enables readers to gain both conceptual understanding and practical hands-on skills. It is ideal for practicing motor control engineers, graduate students, and embedded system developers in automation, robotics, and electric drive industries who want to bridge the gap between theory and product-ready solutions.