

1. Record Nr.	UNINA9910647242403321
Titolo	Advanced Permanent Magnet Machines and Drives // edited by Bing Tian, Quntao An, Xinghe Fu
Pubbl/distr/stampa	[Place of publication not identified] : , : MDPI - Multidisciplinary Digital Publishing Institute, , 2023
ISBN	3-0365-6304-0
Descrizione fisica	1 online resource (194 pages)
Disciplina	621.46
Soggetti	Permanent magnet motors
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Performance Evaluation of an Axial Flux Machine with a Hybrid Excitation Design 1 -- Single Line/Phase Open Fault-Tolerant Decoupling Control of a Five-Phase Permanent Magnet Synchronous Motor under Different Stator Connections 13 -- A Study on the Improvement of Torque Density of an Axial Slot-Less Flux Permanent Magnet Synchronous Motor for Collaborative Robot 31 -- Research on a Limit Analytical Method for a Low-Speed Micro Permanent Magnet Torque Motor with Back Winding 45 -- Observer Based Improved Position Estimation in Field-Oriented Controlled PMSM with Misplaced Hall-Effect Sensors 65 -- Variable Weighting Coefficient of EMF-Based Enhanced Sliding Mode Observer for Sensorless PMSM Drives 79 -- Analysis and Error Separation of Capacitive Potential in the Inductosyn 93 -- Dual Three-Phase Permanent Magnet Synchronous Machines Vector Control Based on Triple Rotating Reference Frame 105 -- Influence of the Shielding Winding on the Bearing Voltage in a Permanent Magnet Synchronous Machine 119 -- Virtual Modeling and Experimental Validation of the Line-Start Permanent Magnet Motor in the Presence of Harmonics 139 -- Review on Model Based Design of Advanced Control Algorithms for Cogging Torque Reduction in Power Drive Systems 157.
Sommario/riassunto	This reprint is comprised of eleven articles that are screened by our hard-working peer reviewers. It mainly focuses on the recent advances in electric motors and drives, to adapt to the ongoing trends of

electrification in both transportation and industry. New structural motors, such as the axial flux machine and the multi-phase machine, are introduced because of their enhanced reliability for use in next-generation electrified transportation. Special attention is also given to the micro PM motor, which has a broad use in many areas. In addition, advanced control techniques, such as position sensorless control and fault-tolerant control, are also incorporated to fulfill the demand for safe crucial applications, and the modeling of the bearing voltage and a line-start permanent magnet motor can be of particular interest to the industrial sectors. Through this reprint, we hope to provide a new perspective for the readers to manage their encountered problems, as well as stimulate innovative ideas for the electrified transportation of the next generation.

---