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Nota di contenuto	Cover -- Series Page -- Title Page -- Copyright Page -- Contents -- Preface -- Chapter 1 Brushless Direct Current Motor -- 1.1 Brushless DC (BLDC) Motors -- 1.2 Construction of Brushless DC (BLDC) Motors

-- 1.3 Brushless DC Motor Drive System -- 1.4 Position Sensors -- 1.5 Features and Advantages of BLDC Motors -- 1.6 Permanent Magnet Rotor Configuration -- 1.7 Types of BLDC Motors -- 1.7.1 Trapezoidal Type BLDC Motor -- 1.7.1(a) Advantages -- 1.7.1(b) Disadvantages -- 1.7.2 Sinusoidal Type BLDC Motor -- 1.7.2(a) Advantages -- 1.7.2(b) Disadvantages -- 1.8 Square Wave Brushless Motor -- 1.9 Torque/Speed Characteristics of BLDC Motor -- 1.10 Applications of BLDC Motors -- 1.11 Conclusion -- References -- Chapter 2 Permanent Magnet Synchronous Motors -- 2.1 Fundamentals of Permanent Magnets -- 2.2 Early History of Permanent Magnet -- 2.2.1 Alnico Magnet -- 2.2.2 Ceramic Magnet

Sommario/riassunto

This book provides an in-depth exploration of specialized electrical machinery, emphasizing advanced motor technologies. It covers various types of motors including Brushless Direct Current (BLDC) motors, Permanent Magnet Synchronous Motors (PMSM), Hysteresis Motors, Switched Reluctance Motors (SRM), Stepper Motors, and Universal Motors. The text delves into their construction, operational principles, control mechanisms, and applications, highlighting their significance in industries such as electric vehicles and renewable energy. The authors aim to bridge gaps in traditional engineering literature by offering detailed insights and sophisticated strategies for designing and optimizing these specialized machines. The intended audience includes students, engineers, and professionals in electrical engineering.