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Chapter 5: Dynamics of Rotational Systems; 5.1 Introduction; 5.2 Preliminaries; 5.3 Rotational Dynamics; 5.4 Coupling Mechanisms; 5.5 Highlights; Problems; Further Reading; Chapter 6: Power Electronic Converters; 6.1 Introduction; 6.2 Linear Voltage Regulator; 6.3 Switched Approach; 6.4 Basic Assumptions; 6.5 Buck Converter; 6.6 Discontinuous Conduction Mode; 6.7 Other Basic Converter Structures; 6.8 DC-DC CONVERTERS WITH ISOLATION; 6.9 Highlights; Problems; Further Reading; Chapter 7: Simple Electrical Machines; 7.1 Introduction  
7.2 Motional Voltage and Electromagnetic Force 7.3 Simple Linear dc Machine; 7.4 Basic Operation of the dc Machine; 7.5 Practical DC Machine Construction; 7.6 Practical DC Machine Configurations; 7.7 DC Machine as A Component in A System; 7.8 Highlights; Problems; Further Reading; Chapter 8: AC Machines; 8.1 Introduction; 8.2 Three-Phase AC Electrical Port; 8.3 Ac Machine Stator; 8.4 Synchronous Machine; 8.5 Induction Machine; 8.6 Highlights; Problems; Further Reading; Index

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Sommario/riassunto

Teaching the principles of power electronics and electro mechanical power conversion through a unique top down systems approach, The Principles of Electro mechanical Power Conversion takes the role and system context of power conversion functions as the starting point. Following this approach, the text defines the building blocks of the system and describes the theory of how they exchange power with each other. The authors introduce a modern, simple approach to machines, which makes the principles of field oriented control and space vector theory approachable to undergraduate students as

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