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Sommario/riassunto

This book, authored by Horst Schulte, focuses on advanced control systems for renewable energy power plants, specifically using LMI-based design within the Takagi-Sugeno framework. It covers the modeling and control of wind turbines, photovoltaic power plants, and voltage source converters, with an emphasis on grid integration and stability analysis. The book aims to provide a comprehensive understanding of model-based control concepts for optimal energy conversion and grid integration. It is intended for students, industry professionals, and researchers in control systems and electrical power systems, offering insights into the development and validation of control models.