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   Nota di contenuto   Power Electronic modelling and simulations using DIgSILENT
                       PowerFactory -- Integration of Large Scale Photovoltaic Power Plants
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                       Language (DSL): Islanding Operation of Microgrid System with Multi
                       Energy Sources -- Dynamic Modelling and Co-Simulation between
                       Matlab-Simulink and DIgSILENT PowerFactory of Electric Railway
                       Traction Systems -- Transient Stability Assessment of Power System
                       Incorporating DFIM-Based Pumped Storage Hydropower and Wind Farm
                       -- Implementation of a Generic Type 3 Wind Turbine Model in
                       DIgSILENT PowerFactory -- Battery Energy Storage System Modelling in
                       DIgSILENT PowerFactory -- A benchmark test system for the power
                       system stability assess-ment considering very high penetration of
                       converter based generation units including grid forming converters --
                       System protection schemes as a way to prevent bottlenecks of the
                       power system considering the Integration of Ofshore and onshore wind
                       turbines and HVDC link -- Implementation and performance
                       comparison of derivative and virtual synchronous power methods for
                       enhancement of system frequency stability -- Modelling and simulation
                       of wind turbines with grid forming direct voltage control and black-

start capability -- Generic Modelling of PEM Technologies for Power System Stability Studies Based on PowerFactory -- PST-17 Benchmark Power System DSL-based model with 90% Power Electronic Interfaced Generation with Black-Start and Grid Restoration capabilities in DIgSILENT PowerFactory -- Applications of PowerFactory for the study of basic notions of power system dynamics in graduate courses.

Sommario/riassunto	This book provides an overview of power electronic converters for numerical simulations based on DIgSILENT PowerFactory. It covers the working principles, key assumptions and implementation of models of different types of these power systems. The book is divided into three main parts: the first discusses high-voltage direct currents, while the second part examines distribution systems and micro-grids. Lastly, the third addresses the equipment and technologies used in modelling and simulation. Each chapter includes practical examples and exercises, and the accompanying software illustrates essential models, principles and performance using DIgSILENT PowerFactory. Exploring various current topics in the field of modelling power systems, this book will appeal to a variety of readers, ranging from students to practitioners.