

1. Record Nr.	UNINA9910728387503321
Titolo	Intelligent Solutions for Smart Grids and Smart Cities : Select Proceedings of IPECS 2022 // edited by Pierluigi Siano, Sheldon Williamson, Sabeena Beevi
Pubbl/distr/stampa	Singapore : , : Springer Nature Singapore : , : Imprint : Springer, , 2023
ISBN	981-9909-15-5
Edizione	[1st ed. 2023.]
Descrizione fisica	1 online resource (493 pages)
Collana	Lecture Notes in Electrical Engineering, , 1876-1119 ; ; 1022
Disciplina	307.760285
Soggetti	Computational intelligence Electric power production Electronics Computational Intelligence Electrical Power Engineering Electronics and Microelectronics, Instrumentation
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references.
Nota di contenuto	Objectives and Constraints for Optimal Allocation of Distributed Energy Sources — A Review -- Design, Implementation and Analysis of Solar Photovoltaic System Efficiency with Cooling System and Mechanical Tracking -- Design and analysis of small PV-Hydro turbine power system -- Control of grid tied solar battery system with irradiance based MPPT -- High step-up DC-DC converter with quartic voltage gain -- Design and Simulation of Coupled Inductor based Asymmetric High Gain Multi-Input DC-DC Converters -- Automatic Generation Control with HVDC Tie link in Multi Area Power System -- A Droop Controller Based Active Power Sharing of Multi Inverter Based islanded Microgrid -- Demand-Side Management and Compensation using Electric Spring considering Electric Vehicle as a Critical load -- Enhanced Smart Grid Resilience Using Autonomous EV Charging Station -- Adaptive Multiple Step Size Incremental Conductance Maximum Power Point Tracking algorithm with Zero Oscillation for Solar PV Applications -- High impedance fault arc modelling – A review -- Non-Isolated DC-DC Converter with High Voltage Gain for DC Grid --

Sommario/riassunto

This book comprises the select proceedings of the International Conference in Power, Energy, Control, Signals and Systems (IPECS) 2022. The book focuses on intelligent solutions for smart grids and smart cities. The content of this book is designed to develop many innovative ideas for an energy-efficient and sustainable future. It focuses on recent technological advances and challenges in the field of grid integration of renewable energy resources, AI/ML in power and energy systems, security enhancement of power systems/electronics using advanced ML techniques for integration of renewable energies, electric vehicle-energy storage, and battery charging technologies, etc. The book also covers the latest advances especially in instrumentation and control in smart grid applications —Internet of Things and cyber-physical systems, power semiconductor device technology leading to improvements in power losses for power electronic systems, economic and sustainable design of smart cities-security and data privacy in smart cities, lighting, and illumination. This book proves to be a valuable resource for those in academia and industry.
