





Special Issue Reprint

# Electrical Power Engineering and Renewable Energy Technologies

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Due to the decreasing availability of fossil fuel resources and rising environmental awareness, innovative methods of renewable energy generation and utilization are rapidly becoming of interest to researchers. Electrical drives and power electronics are one of the most critical components of modern renewable energy systems. The robustness of machines and the increased efficiency of power semiconductor devices enable the improvement of many types of power conversion and generation systems. Thus, this reprint presents and disseminates recent advances regarding theory, modeling, design, application, control, and analysis related to the advancement of electrical engineering in renewable energy. It clarifies the junction of two interesting areas that serve to link information derived from electrical engineering and renewable energy, including recent techniques used to design and model various renewable energy systems, and demonstrates different ways to use power electronics in renewable systems. The reprint also discusses the best ways to identify, design, integrate, and operate the most appropriate technologies through key problems. And it offers some applications related to electrical power engineering and renewable energy technologies, including photovoltaic systems, solar water pumping systems, electric vehicles, microgrid systems, battery energy storage, etc.





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