Special Issue

Innovative Smart Microgrids for Power System

Message from the Guest Editor

Recently, there is an increasing demand for the transition from fossil fuel-based centralized power systems to low-carbon, renewable-based decentralized power systems. The additional intelligent functionality on Micro-Grids (MGs), enabling real-time information exchanges and energy flows between consumers and grids categorized a Smart Micro-Grids (SMGs). The SMGs are a newer technology and an extension to the regular MGs. Many intelligent management and control methods of SMGs have been developed and introduced to enhance their reliability, quality, and cost-effectiveness.

- Current state of SMGs in the world;
- A success story or field test result of SMGs;
- Review of SMGs;
- Intelligent control of energy conversion of converter/inverter;
- AI application for energy management systems of SMGs;
- Cost-effective and optimized design techniques for SMGs;
- Optimization of distribution networks with DG/RES/SMGs;
- Modelling and simulation of renewable energy resources;
- Modelling and AI optimization of energy storage system;
- Modelling and optimization of EV/EV charger;
- Information exchange between SMGs and power system;
- Intelligent demand and supply forecasting techniques.

Guest Editor

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Deadline for manuscript submissions

closed (15 May 2025)

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Electronics is a multidisciplinary journal designed to appeal to a diverse audience of research scientists, practitioners, and developers in academia and industry. The journal is devoted to fast publication of latest technological breakthroughs, cutting-edge developments, and timely reviews of current and emerging technologies related to the broad field of electronics. Experimental and theoretical results are published as regular peer-reviewed articles or as articles within Special Issues guest-edited by leading experts in selected topics of interest.

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