



Recent Advances in Modeling, Optimization and Control of the Distributed Energy Resources

Dear Colleagues,

Electric power-transmission and -distribution systems are undergoing a considerable transition toward Smart Grids, which are reliable and efficient networks to which distributed generation systems from renewable sources, smart and flexible loads, energy-storage systems, and electric vehicles are connected.

With the growing number of Distributed Energy Resources (DERs), power supply flexibility is also becoming more important. In order to utilize DERs to their fullest potential, advanced technologies and tools must be used for their management and optimization.

This Special Issue calls for original research articles, reviews, and case studies on the theories, frameworks, mechanisms, regulations, and supporting technologies behind DERs. Topics include, but are not limited to:

- Distributed generation, renewable energy resources, smart grids, and microgrids.
- The impact of DERs interconnection on the distribution network.
- Distributed generators and energy storage systems integration.
- Practical application applied to foster the diffusion of the Renewable Energy Sources (RES)-based Distributed Generation.
- The integration and Control of DERs;
- The design and implementation of future DER systems.
- Ancillary services under the highly variable penetration of RES-based distributed generation.

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