

Special Issue

Deep Learning Applications in Optimization and Control of Power Transmission and Distribution

Message from the Guest Editors

With the growth in the amounts of data collected in power systems due to the introduction of higher-resolution sensors at various levels of the system and the push toward automation and intelligent data-driven decision making, deep learning-based AI methods have received significant interest in recent years. The ability of deep learning to consume large quantities of high-resolution data and develop high-fidelity accurate models can be used to make fast and efficient decisions applicable to all levels of power systems, from forecasting to planning to real-time decision making. However, several challenges remain, especially in relation to providing guarantees for the safe and reliable operation of the power system, as well as developing modeling that are explainable to network operators. Furthermore, different challenges in adopting deep learning exist at the transmission and distribution levels. This Special Issue aims to develop explainable deep learning models for the safe operation of power systems at the transmission and distribution levels.

Guest Editors

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