Special Issue

Sensor Technology for Digital Twins in Smart Grids

Message from the Guest Editors

Smart grids are playing an increasingly significant role within the realm of smart environments. Digital twins for smart grids are virtual replicas or models of an entire electrical grid, created using digital technologies, data analytics, and simulation. These digital representations mimic the behavior and state of the physical grid, providing a complete, real-time view of grid operations. The digital twins process the data that they continuously receive from the smart grid. To this end, sensor technology plays a crucial role in enabling real-time data and information to be obtained from various points on the grid, which helps to optimize grid performance, improve reliability, and facilitate efficient energy management. Sensor technology is a fundamental component of modern energy systems, designed to be more efficient, reliable, and environmentally sustainable.

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Sensors is a leading journal devoted to fast publication of the latest achievements of technological developments and scientific research in the huge area of physical, chemical and biochemical sensors, including remote sensing and sensor networks. Both experimental and theoretical papers are published, including all aspects of sensor design, technology, proof of concept and application. Sensors organizes Special Issues devoted to specific sensing areas and applications each year.

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