Special Issue

Optical Sensing in Power Systems

Message from the Guest Editor

As we transition to a sustainable future, the power system requires ever more granular and extensive measurement in order to enable greater integration of renewable generation and to drive up efficency. At every level of power flow-generation, conversion. transmission and distribution-extensive measurements are required. Voltage and current measurements are needed for power system control, protection, and metering. AC, DC, and high-frequency dynamic measurements are required, with voltages reaching MV levels and currents tens or hundreds of kAs. Measurments of other physical parameters such as temperature, strain, vibration, humidity, chemical species, or partial discharge are also required for diagnostic and prognostic purposes of plant or for perimeter breach security alerts. Distributed measurements are also crucial for improved power grid visibility to offer wide-area monitoining, control, and protection. For more details, please visit here.

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