Special Issue

Power Quality in Modern Distribution Systems: Latest Advances and Prospects

Message from the Guest Editors

Power quality (PQ) issues have expanded to include additional disturbances emitted by switching converters installed at the interface between loads and the distribution network. No less important are the expected evolution trends toward DC distribution, for which PQ indexes need to be defined to characterize levels and prospectively establish planning and compatibility objectives. The increased interest in improving energy efficiency makes the containment of additional losses due to PQ-conducted disturbances crucial. Topics of interest for publication include, but are not limited to:

- All aspects of PQ disturbance—variations, harmonics, supra-harmonics, unbalances, events, voltage dips, voltage swells, interruptions, and others;
- PQ in micro-grid and RES energy communities;
- DC distribution systems;
- Models and methods for forecasting PQ levels;
- Energy efficiency tied to PQ levels;
- Supra-harmonic distortion—models, methods, and indices;
- Voltage dip and swell propagation;
- Data-driven approaches for forecasting, managing, and controlling PQ levels;
- Unbalances;
- Transient overvoltages (surges/spikes).

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