

ICHQP 2022

20th International Conference
on Harmonics and Quality of Power
Naples, Italy, May 29th - June 1st 2022



SPECIAL SESSIONS

Session Title

Special Session on Forecasting and Analytics for Power Quality Problems

Abstract

The sources of randomness in modern power systems are continuously growing due to the increasing share of renewables and loads, with a particular interest related to the penetration of electric vehicles. Most of this equipment are sources of power quality (PQ) disturbances (harmonics, interharmonics, supraharmonics, low voltage variations, flickers, etc.). Modern smart meters and distributed sensors allow to collect an immense amount of data for evaluating PQ levels, energy generation and consumption, weather conditions, etc.

Appropriate forecasting methods can be applied to define proper strategies for the PQ disturbance compensation or limitation at node, area or system levels under these random features. On the other hand, analytics and data mining techniques allow a better understanding of the PQ disturbance level uncertainties and a more accurate statistical characterization.

The special session will invite specialists around the world to discuss several fundamental issues on data analytics and forecasting methods applied to:

- Power Quality Analysis
- Power Quality Monitoring /Reporting Methodologies and Indices
- Probabilistic Aspects of Power Quality
- Renewable Generation / Distributed Generation and Power Quality
- Power Quality and Reliability
- Power Quality Analytics and Data Mining
- Forecasting Techniques Applied to Power Quality

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