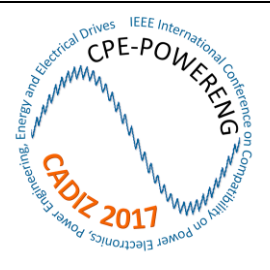




**2017 11th International Conference on
Compatibility, Power Electronics and Power
Engineering
CPE-POWERENG 2017
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**4-6 April, 2017
Cadiz, Spain**

CPE-POWERENG 2017 Special Session

Special Session on: Challenges in the Large Scale Presence of Photovoltaic and Others Energy Efficient Technologies into the Electric Grid

Technical Outline of the Session (100-200 words) and Topics:

During the last years there has been a huge increase in the amount of solar power connected to the grid and this trend is expected to continue and even grow during the coming years. On the other hand, the power quality interest in power systems has increased as grid-connected modern power electronic devices become more important to face global environmental challenges. Those facts lead to new challenges to which the electricity network is exposed to, as the power industry grows with the trend of embedded and dispersed generation. It is of major importance to assess the possible impact that grid-connected modern power electronic devices have on the power quality of a specific grid. We are facing a situation where new technology is less tolerant to voltage quality disturbances, and the spread use of power electronic converters, contributes to the relevance of power quality. The scope of this Special Session includes, but is not limited to:

- Power converter topologies for grid-connected PV systems and others energy efficient technologies
- Control strategies and modulation techniques of PV converters
- Efficiency, reliability and power quality of PV systems and others energy efficient technologies
- Technical issues of PV systems: MPPT methods, anti-islanding detection methods, fault tolerant operation, fault diagnosis
...
- Energy Storage Systems in PV power plants
- Grid integration of PV systems and market regulations
- Integration Issues of solar generation systems
- Demand response applications for PV integration
- Robustness analysis of the efficiency in PV inverters
- Harmonic emission interaction between energy efficient technologies and PV inverters
- Advanced Measurement Techniques in PV inverters
- Integration of PV systems and energy storage in Smart Communities

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