Special Session on

Solar Power Plant Management, Reliability and Integration in desert/harsh environments

Organized and Chaired by:

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Call for Papers

Outline of the Session:

The proliferation of renewable energy has changed the operational paradigm of power systems. As solar power plants become a ubiquitous component of power systems worldwide, there is a growing need for decision-making tools that enable a proactive approach to the optimized operation, management and grid-integration of solar energy power plants at the utility and commercial/residential levels. The operation and maintenance of solar power plants is an important cost for the system and a crucial factor for electricity production, reliability and failures detection. Solar power plants also represent an operation and maintenance challenge because different technologies and climates may require different solutions. The future challenge in the management and integration of solar power plants is the development of advanced risk prediction and mitigation tools to reduce the impacts of solar energy generation variability, improve power output quality, integrate centralized and decentralized solar power generation into conventional grid operations, and anticipate solar energy asset failures and outages.

Topics of the session include, but are not limited to:

- Meteorological and Environmental Data Wrangling and Modeling
- AI and machine learning methods in solar power plant management and integration
- Predictive risk assessment and mitigation for solar energy asset interface management
- Predictive risk assessment and mitigation for grid impact management
- Predictive solar power plant risk management automation
- Testing, Validation, and Techno-economic Analysis
- Operation and Maintenance approaches of solar power plant installations in different climates
- Aerial inspection methods for failure detection in large solar power plants
- Prediction and mitigation of soiling in large solar power plants
- Data monitoring and automated failure analysis of large solar power plants

Author's schedule:

Deadline for submission of special session papers	December 15, 2021
Notification of acceptance	January 15, 2022
Deadline for submission of final manuscripts	February 15, 2022

All the instructions for paper submission are included in the conference website:
http://www.sgre-qa.org/