

International Conference on Energy, Power and Environment (Towards Clean Energy Technologies)

September 04 – 06, 2020

National Institute of Technology Meghalaya, Shillong, India



ICEPE 2020

ICEPE 2020 Special Session (SS-10)

1. Title of the special session

Resilience of Power Systems

2. Aims & Scope of the Session:

Resilience against extreme events, such as natural disasters and deliberate attacks, is considered as a most essential feature of the future smart grid. Although resilience is becoming a hot topic in the electric power academy and industry, we still do not have a well-accepted definition for it. The difference and relation between resilience and other related concepts, such as reliability, security and robustness, are not clear. A set of metrics for quantification of grid resilience is also needed. The modelling of extreme events and their impacts on power systems should be evaluated. Modelling, simulation, analysis, and management of dependency among different infrastructures are challenging tasks. In addition, measures to enhance resilience by design, planning, preparedness, mitigation, response, restoration and recovery measures should be explored.

This session will bring together experts in the area of resilience to share and exchange novel ideas on definition, quantification, analysis, and enhancement of resilience for power systems.

3. Topics of interest include, but are not limited to:

- Quantification of Power System Resilience
- Design and Implementation of Resilience in Power Systems
- Analysis of Power System Resilience
- Enabling of Power System Resilience
- Decision Support Tool to Enhance Power System Resilience
- Role of Artificial Intelligence and Machine Learning Approaches in Power Systems Resilience
- Operational strategies for Resilient Power System
- Planning of Resilient Power System
- Case studies on Power System Resilience

4. Special Session Organizers:

1. Dr. Prabodh Bajpai

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Prabodh Bajpai has received the B.E. degree in Electrical Engineering from University of Roorkee (Now, IIT Roorkee), the M.Tech degree in Energy Studies from IIT Delhi, and the Ph.D. degree in Electrical Engineering from IIT Kanpur, in 2008. He is working as Associate Professor in the Department of Electrical Engineering and joint faculty in School of Energy Sciences and Engineering at IIT Kharagpur.



2. Dr. Neeraj Kumar Goyal

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