



Special Session on

Distributed Energy Resources: Optimal Sizing , Energy Management and Control Techniques.

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ABSTRACT:

Power production through Distributed Energy Resources (DER) is dragging much attention amidst the glooming global power crisis. Widespread penetration of DERs has led to security and economic issues to the prevailing active distribution networks. Especially, the non-continuous natures of DERs inflict challenges during planning stage of networks. Therefore appropriate location identification and sizing are the two vital parameters that alleviate the security and economic issues substantially. Power Maximizations algorithms are dragging much attention since its inception, but these algorithms may not go in hand when distributed sources are hindered by environmental hindrances. Therefore smart Maximum Power Point Tracking (MPPT) algorithms using intelligent soft computing techniques are needed to make most out of the available power in the power sources. On the other hand, the distributed and variable nature of renewable creates challenges for an electrical grid built for centralized generation and predictable loads. Therefore issues in appropriate sizing, planning with storage systems and integration between sources and to the load should be witnessed prudently. This special session aims at bringing together researchers, faculties from academia, industrial expertise to create a platform where knowledge, ideas, innovations can be shared in improving the performance of distributed power generation systems, optimizing its power yielding capacity , sizing and scaling to meet appropriate loads.

Topics include, but not limited to,

- **Modeling and Analysis of Distributed renewable energy sources.**
- **Control Systems and Optimization in Renewable Energy Systems.**
- **Soft computing techniques in power maximization algorithms.**
- **Advances in control of distributed systems and hybrid sources of energy.**
- **Renewable Energy Sources, Technologies and Systems Applications.**
- **Role of Distributed Energy resources in Smart Grid.**
- **Optimal Sizing and location of DGs in Power System Planning, Operation and Control.**
- **Power Electronics in Renewable Energy Systems**
- **Power Quality, Grid Reliability and Availability**

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Deadlines of the special session:

Full paper submission due: August 5, 2017

Notification of acceptance: September 10, 2017

Final Paper submission: September 25, 2017

Conference Date: November 5-8, 2017 www.icrera.org