

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-12)

1. Title of the special session

Power Electronics Interfaces and their control for Distributed Energy Resources, Storage Systems and Electric vehicle

2. Aims & Scope of the Session:

In contemporary world distributed energy resources (DER) are integral part of available power sources to feed either grid connected or standalone loads. Many a times these DERs particularly renewable being intermittent in nature storage elements are required to maintain quality power. Further, with integration of more and more electric vehicles in our transportation system, these can also act a portable DER in times of need. The interconnection of this DER for various off-grid and grid mode application is made feasible through modern power electronics interfaces. This Special session addresses different power electronics topologies and control for varied applications such as DER integration with DC/AC microgrid, storage, electric vehicle and harmonic mitigation etc.

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

- Emerging Power Converters for DC/AC microgrid.
- Power converter of High step-up DC-DC Converter.
- Non-Isolated and Isolated Converter.
- Multi- Port DC-DC Converters.
- Fault tolerant converter configuration.
- Resonant converter for renewable energy application
- Power converters operation and control under adverse grid conditions
- Power electronic interface and control in electric vehicles
- Energy managements control under multiple distributed energy resources
- Modern power electronics switches driving circuit design for SiC or GaN.
- Multilevel converters for distributed renewable energy, energy storage etc.
- Power electronics interface for energy storage systems

4. Special Session Organizers:

Dr. Amritesh Kumar
Assistant Professor
National Institute of Technology Silchar, Assam, INDIA
Email: amritesh@ee.nits.ac.in, amritesh.nits@gmail.com
Contact: (+91) 9818209336

Dr. Amritesh Kumar was born in 1986 in Muzaffarpur district, Bihar, India. He completed his 10th class from May Flower School, Patna and 12th from Delhi Public School, Ranchi, Jharkhand. He completed B.Tech in Electrical and Electronics Engineering from SASTRA University, Tamilnadu, India in 2009. He obtained M Tech in Power Electronics and Drives from BITS PILANI, India in 2011. He obtained his Ph.D. in 2017 from Delhi Technological University (DTU), formerly Delhi college of Engineering, Delhi, India. Along with the research works, he also worked as an Assistant Professor at Delhi Technological University (DTU) from 2013 to mid June 2018. Then he joined NIT Silchar and serving there as an Assistant professor from 18th June, 2018 onwards.