

# About PARC 2020

Looking at the importance of power electronics, IoT and their applications in the modern smart grid and the increasing integration of renewable energy due to increasing environmental concerns, this conference theme is set on “Power Electronics, IoT and Renewable Energy applications”, and it is planned to further explore these research areas. This conference aims to explore the challenges in Future Grid-Interactive Power Converters regarding control strategies, optimal operation, and corrective actions. PARC 2020 also targets to present latest research on new strategies for overcoming the technical challenges of grid integration of renewable energy systems, such as synchronization of interfaced converters with power grid, operation and control of different power converters in power systems under large shares of renewable energies. The other thrust area of this conference is applications of IoT analytics in renewable energy sector. This conference will be a launch pad for many researchers to present emerging topics on power electronic technologies and renewable energy integration and control for future energy applications.

The topics of the conference include, but are not limited to, the following areas:

- Emerging Technologies in Power Electronics
- Power Converter Topologies and Design
- Multilevel and High-Power converters
- Grid-Interactive Power Converters
- Power electronics in HVDC, HVAC, and FACTS
- Emerging power electronic based power systems
- Ancillary services through grid-interfacing power converters
- Energy Storage technologies
- Metering, Monitoring and Protection
- Power electronics in transmission and distribution systems
- Standard and advanced control techniques for power converters
- Control of multi-machines/multi-converters
- Management of distributed systems
- Computational intelligence in control systems
- Measurements techniques
- Sensors
- Wireless control
- Renewable Energy Systems
- Renewables Penetration
- Distributed Generation and its Protection
- Grid integration of renewable energy systems
- Standalone and grid connected systems
- Sustainable Energy Technologies and Systems
- IoT Technology in the Energy Sector
- Next Generation IoT
- IoT Devices/Applications
- Big data analytics in Energy Sector
- IoT Security
- Smart Metering
- Smart Cities – Buildings, Home Automation
- Electric Vehicles Charging stations
- Electric Vehicle Propulsion Systems and Their Energy Storage
- Data Analysis Challenges in the Future energy market
- Cloud analytics for Internet of Things (IoT)
- Energy Internet
- IoT applications in renewable sector
- Control of power electronics converters
- Harmonics and harmonic stability in renewable based power plants
- Control Techniques for Renewable Energy Systems
- Future Challenges and Directions for Renewable Energy Systems.
- Electrical Machines and Drive Systems
- Data analysis applied to Power Electronics and drives systems