

Title: Smart Low Voltage DC Microgrid

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Abstract: With rapid growth of DC loads in the residential as well as in building, the DC nature of most renewable energy resources and energy storage units, DC microgrids are becoming viable alternatives. The DC microgrid provides several advantages in terms of redundancy, modularity, fault tolerance, higher efficiency, high reliability, easy maintenance, smaller size and lower design cost. This track provides a platform for researchers and engineers from Academia, Industry and Utility to exchange their knowledge, expertise and experience on DC Microgrid. Topics of the track include, but are not limited to:

- Economic aspects of microgrids
- Topologies of DC distribution systems
- Distributed monitoring and control strategy for microgrids
- Protection and stability issues in microgrids,
- DC distribution architectures in buildings
- Energy management solutions for microgrids
- Power quality issues
- Energy storage technologies
- Reliability and resiliency of microgrid

A detailed description of the topic

The world suffering from the electrical energy deficiency but the number of new appliances is going developed in the market day by day. However, the renewable energy is the solution of this deficiency, but the best utilization of these renewable energy resources is in the form of DC microgrid, which can be installed individually or jointly. There is large scope in the designing, integration with other resources or storage device, management, protection, installation and many more of DC microgrid. Recently, there are some work has been done and some is going on in this area but far from those the topic requires more and more research. So the proposed track will open a way for the researchers to contribute their ideas in the form of precious research on DC micro grid. Authors are invited to contribute their work on following topics under this track:

It can be completed by an Internet link to some additional material (recommended).

1. www.rksworld.com
2. <http://personprofil.aau.dk/124612>

The Choice of an IFAC technical committee for evaluation (TC 6.3 for Power & Energy Systems)