The First International Workshop on
Smart Power Grids for Developing Countries
(SGDC’16)

with
www.green-conf.org

November 7-9, 2016, Hangzhou, China

Website: http://uet.edu.pk/sgdc2016

Scope:
Smart grids improve efficiency and reliability of a power system by monitoring different states of the system. The key virtue of a smart grid is the reliable and accurate acquisition of system parameters that are used by intelligent controllers for the control of power electronic converters which interface renewable energy resources with the macro-grid. The control of converters—operating in parallel in a controlled micro-grid, demands judicious integration of communication and computing techniques and technologies. For efficient and reliable operation of the smart grids, monitoring and collection of system parameters, control of converters, fault detection and analysis, cyber-attacks, smart-metering based data acquisition, and integration with existing grids are real research challenges. This workshop is aimed to address such challenges faced in the implementation of smart grids in developing countries. The authors are invited to submit research papers related to the theme of *Significance of Smart Power Grids for Developing Countries*. The idea is to provide a platform for researchers from academia and industry to share their knowledge and experience. Both the original research and the field experience with existing and emerging technologies can be presented. Researchers from both developed and developing countries are encouraged to present their research and share their knowledge. The main sub-areas inviting research papers are:

1) Challenges faced about smart metering for data acquisition in existing power systems
2) System protection challenges in micro-grids formed through distributed generation
3) Role of power electronic converters in smart grids
4) Challenges faced by distribution utilities in managing weak grids with DERs
5) Communication, control and sensing issues in smart grids
6) Big data and information management challenges of smart grids
7) Role and architecture of AC, DC and hybrid micro grids
8) Planning and operation for optimized performance in smart grids
9) Power quality issues and challenges in smart grids
10) Changes in regulatory framework for adoption of smart grids in developing countries

The following invited talks will be delivered, followed by open discussions on the relevant and emerging trends.

- Challenges faced in smart metering for data acquisition in existing power systems (Nauman Ahmad Zaffar, SSE, LUMS, Lahore)
- Interactive data analysis and visualization for control of smart grids (Dr. Muhammad Naeem Ayyaz, Namal University, Mianwali)

Duration of each presentation will be around 60 minutes, followed by 15 minutes of Q&A.

**Author Information:**
Full papers following the guidelines of the International Green and Sustainable Computing (IGSC) Conference (http://igsc.eecs.wsu.edu/cfp_16) are sought. Authors should submit their papers on EasyChair by signing into https://easychair.org/conferences/?conf=sgdc16. All submitted manuscripts will be reviewed and evaluated on correctness, originality, technical strength, significance, quality of presentation, and interest and relevance to the scope of the workshop. Papers presented at the workshop will be published in the official conference proceedings (through IEEE Digital Library) contingent on two conditions: one author of each accepted paper must register for the conference at the time of the submission of the final manuscript and one of the authors must appear to present the paper at the workshop. A complete and properly formatted paper must be submitted electronically. Please note that each accepted workshop paper will require a full IGSC registration at the IEEE member or at the nonmember rate (not student rate). There is no separate workshop-only registration.

**Submission due:** August 01, 2016  
**Notification of acceptance:** September 15, 2016  
**Camera-ready papers due:** October 01, 2016

**Workshop Organizers:**
1) Dr. Muhammad Naeem Ayyaz, Namal University, Mianwali. (Workshop Co-Chair)  
2) Dr. Saqib Ilyas, Namal University, Mianwali. (Workshop Co-Chair)  
3) Nauman Zaffar, School of Science and Engineering, LUMS, Lahore. (Workshop Co-Chair)  
4) Dr. Waqar Mehmood, Khawarizmi Institute of Computer Science, University of Engineering and Technology, Lahore.