Special Session on
Development and Integration of EV in Smartgrid/Microgrid/Grid:

Abstract:

Electronic Vehicles would present a promising solution to the growing concern of depletion of fossil fuel reserves around the world. Moreover, EVs has the potential to serve electric grid as an independent energy source which will give a favorable solution in controlling environmental pollution and energy safety issue. It is predicted that EVs can serve subsidiary functions in the grid such as voltage and frequency regulation, peak power leveraging and reactive power support to enhance the operational efficiency and secure the electric grid.

However, there are different challenges and problems that are yet to be resolved in the proper implementation of EVs in Grids. One major challenge in this field would be to identify the relative shortcomings and limitations. Concerning issues would be complications related to large scale EV integration, Battery efficiency and charging, Changes in equipment cooling patterns and inability to accommodate high-power charging in older infrastructure. Voltage instability arising from the integration of EVs in smart grid is also a major problem which requires a proper solution. This session would include their possible solutions to devise strategies to overcome them in an effective way.

Looking at the benefits of EVs one would think that overcoming the challenges and issues associated with the integration of EV in smart grid has become an important research topic. This session would warmly welcome experts from related fields to share their ideas, predict unforeseen challenges and their probable solutions. Submission of innovative ideas and noble method of solving challenging issues would be warmly welcomed.

Topics include, but are not limited to:

- ✓ Development of Vehicle to Grid (V2G) technology
- ✓ Steady State and transient analysis of large-scale EV integration
- ✓ Characterization of different types of EV batteries
- ✓ Control and management architecture of EV electrical grid integration
- ✓ Future of wireless and other prospective methods of power transfer
- ✓ Fuel cell technologies, hybrid energy storage systems in EV
- ✓ In motion charging: concerns and opportunities
- ✓ Environmental effect assessment for Electric Vehicles
- ✓ Analysis of infrastructure for conducting charging , wireless charging and hydrogen charging
- ✓ EV in grid regulation ancillary services

Organized by
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Important dates of the special session:

Full paper submission due:	July 31, 2017
Notification of acceptance:	Aug 20, 2017
Final Paper submission:	September 15, 2017
Conference Date:	November 05-08, 2017

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