

**THE 28TH IEEE INTERNATIONAL SYMPOSIUM ON
INDUSTRIAL ELECTRONICS
IEEE-ISIE 2019
12-15 JUNE 2019, VANCOUVER, CANADA
Special Session on**

Advances in Battery Charging Techniques for Electric Vehicles

Organized by

R. Sudharshan Kaarthik

e-mail: sudharshan.kaarthik@gmail.com

Assistant Professor, Dept. of Avionics,
Indian Institute of Space Science and Technology,
INDIA.

Deepak Gunasekaran

e-mail: Deepak.Gunasekaran@analog.com

Systems Applications Engineer-Power Conversion
Analog Devices Inc., USA

Call for Papers

Increasing penetration of electric vehicle (EV) technology for transportation requires improving the battery charging infrastructure. Battery charging systems should achieve reliable and safe interconnection to the battery pack and the power grid. Some of the desired traits of these chargers include the ability to achieve ultra-fast charging rates, ultra-high efficiency and power density, and cater to a wide range of grid voltages. Additionally, the growing number of electric vehicles on the road imposes unique constraints on the power grid. Bidirectional battery chargers can enable electric vehicles to provide additional grid energy storage (vehicle to grid – V2G operation) improving grid resiliency and provide “virtual inertia” to the grid.

This session is dedicated for a deep dive on the design, protection, control, and modelling aspects of power converter configurations and auxiliary circuits including grid interfacing converters for electric vehicle applications. Prospective authors are invited to present cutting-edge ideas that can help advance the state of the art in this field.

- **Topics of interest include, but are not limited to**
 - Ultra-fast battery chargers for Electric vehicles (EV)
 - High efficiency power converter configurations for on-board and off-board EV chargers
 - Power factor correction/ front-end converters/ power quality improvement/Vehicle to grid (V2G) systems and control
 - Integrated battery chargers and electric machine topologies
 - Multi-level converters for EV applications
 - Wireless chargers for EVs (Capacitive/inductive coupled)
 - Minimization of passive components (high power-density) in EV chargers
 - Utilization of wide-bandgap devices (high power density/efficiency) in EV chargers.
 - Safety aspects and fault tolerant operation of EV chargers
 - EMI issues in EV chargers
 - Auxiliary circuits and systems for EV chargers
- **IES Technical Committee Sponsoring the Special Session: IEEE-IES Technical Committee on Transportation Electrification**

Instructions for paper submission is given in the conference website: <http://www.ieee-isie2019.org/>