

Annual Conference of the IEEE Industrial Electronics Society (IECON 2021)

Special Session on

“An interdisciplinary approaches and advances in grid interfaced transportation system”

Organized by

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Call for Papers

Theme: Electrification of transportation system is becoming inevitability across all modes of transport from cars, vans, trucks and buses to even ships and more recently planes. These transport loads have the ability to generate and supply additional system services using their on-board battery energy storage systems to the grid via the transport-grid interfacing system. However, providing these services leads to some power and transportation systems constraints. Unlocking the potential of transport-grid interfacing system will require significant technology investment and innovative advanced operations and management solutions across different sectors and disciplines ranging from civil, electrical, and chemical engineering to computer science and business.

Topics of interest include, but are not limited to:

- Advanced energy storage system design for electric mobility, i.e., electric vehicles, electric trains, electric ships, and electric aircrafts

Good quality papers may be considered for publication in the IEEE Trans. on Industrial Electronics, subject to further rounds of review.

- Management and informatics of energy storage system: health prognostic, charge control, thermal/safety management, etc
- Power electronics in transportation-grid interfacing systems: topology, devices, and control.
- Vehicle-grid interfaces: form device level to complex power system
- Business models and interfaces for transport electrification
- Bidirectional converters and integration of battery energy storage to the power grid
- Power factor correction and power quality improvement
- Active and reactive power control of energy conversion systems
- High power density power converters for renewable energies and electric vehicles
- Advanced artificial intelligence and machine learning solutions in energy storage management

A list of 5-10 special areas:

- Power Quality
- Grid Integration of Transportation system
- Energy Management
- Business Models for Transportation Electrification
- Power electronic converters in transportation electrification
- Energy Storage
- Power Electronic Converter Topologies

Submissions Procedure: All the instructions for paper submission are included in the conference website: <https://attend.ieee.org/iecon-2021/>

Deadlines:

Full paper submission:	June 25, 2021
Paper acceptance notification:	July 30, 2021
Camera-ready paper submission:	Aug. 27, 2021