

THE 28TH
IEEE INTERNATIONAL SYMPOSIUM ON
INDUSTRIAL ELECTRONICS
IEEE-ISIE 2019
12-14 JUNE 2019, VANCOUVER, CANADA

Special Session on

“Electric Vehicle Charging Systems and Management”

Organized by

Kim-Fung TSANG, City University of Hong Kong, Hongkong, China,
ee330015@cityu.edu.hk

Chengbin MA, Shanghai Jiao Tong University, Shanghai, China, chbma@sjtu.edu.cn

Mo-Yuen CHOW, North Carolina State University, North Carolina, USA,
chow@ncsu.edu

Call for Papers

Environmental issues have raised attention to microgrids, smart grids and electric vehicles (EVs). The high charging power demand of a large number of EVs will have a strong impact on the operation of the future power grid. Due to the uncertainty in the number, type, capacity and initial conditions of EVs and user behaviours, the proper design of charging systems, communication, and management strategies are critical. The interaction between capture and storage of natural resources (e.g., solar and wind) further complicates charging management. A comprehensive effort is needed to provide flexibility, scalability and autonomy in EV charging systems in a dynamic environment. This Special Section on “Electric Vehicle Charging Systems and Management” is focused on the development, adoption and application of design, communication, energy management and control technologies for future EV charging systems.

Topics of interest include, but are not limited to:

- Architectures and designs of EV charging systems;

- Energy storage and conversion for EV charging (e.g., wired and wireless);
- Design and control of microgrids and smart grids involving EV charging;
- Communication and interaction among charging facilities, EVs, and the grid;
- Key states measurement, estimation, and monitoring;
- Both component-level and system-level modelling and analysis;
- Intelligent EV fleet charging management;
- User behaviour based coordination of EV charging demands;
- Security, reliability and scalability of EV charging systems.