

# Annual Conference of the IEEE Industrial Electronics Society (IECON 2022)

## Special Session on

## “Advanced Propulsion and Charging Technologies for Electrified Transportation Tools”

### Organized by

Chunhua Liu (chunliu@cityu.edu.hk)  
City University of Hong Kong, Hong Kong, China

Hang Zhao (hangzhao@ust.hk)  
The Hong Kong University of Science and Technology (Guangzhou), China

Wei Liu (liuwei@eee.hku.hk)  
The University of Hong Kong, China

## Call for Papers

### Theme:

Electrified transportation tools, including electric vehicles, electric aircraft, and electric vessels, have gradually taken up an increasing share in recent decades. Development in new materials, analysis methods, power electronics, and microchips brings new opportunities and challenges to the current research on electrified transportation tools, especially for its electric propulsion and charging technologies. Indeed, the trend for electric propulsion and charging systems is to evolve towards the advancement in higher torque/power density, higher efficiency, higher reliability, etc. To this end, this Special Session is devoted to the latest advancements in electric propulsion and charging technologies for electrified transportation tools, including electric machines, power electronics, charging topologies, as well as their relevant modeling, integration, and control strategies.

### Topics of interest include, but are not limited to:

1	Emerging technologies of electrified transportation tools
2	High-torque-density electric machine topologies
3	Modeling and optimization of electric machines
4	Integrated motor drive technologies
5	High-power-density power electronics for electric propulsion and charging
6	Wired and wireless charging technologies
7	High-performance control strategies for electric machines and power electronics
8	Modulation strategies and high-order networks for battery chargers
9	Sensorless control and fault-tolerant control for machine drives and battery charging
10	Vehicle-to-vehicle, vehicle-to-home, and vehicle-to-grid charging technologies

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

Sponsoring IES Technical Committee(s):

IEEE IES Technical Committee on **Transportation Electrification** <https://tcte.ieee-ies.org/>

**Submissions Procedure:**

All the instructions for paper submission are included in the conference website: <https://iecon2022.org/>

**Deadlines:**

Full paper submission:	April 15, 2022
Paper acceptance notification:	June 17, 2022
Camera-ready paper submission:	July 29, 2022