

Call for Papers

CMP Chinese Journal of Electrical Engineering

Special Issue on Advanced Electric Machines and Drives for Battery, Hybrid, and Fuel Cell Electric Vehicles

Scheduled Publication Time: August 2021

The world is electrifying everything to achieve ‘deep decarbonization’ and better tackle global climate change. Electric vehicles (EVs) are expected to become the dominant component within the next decades, including battery, hybrid, and fuel cell EVs, by replacing conventional internal combustion engine vehicles. As one of the key components in EVs, advanced electric machine and drive systems are one of the key enablers for this foreseeable transition to the electrification era. Significant research and development efforts have been made in constantly improving the power density, efficiency, and reliability with a reduced cost all over the world by using (i) advanced modeling, analysis, optimization, and control approaches in the design stage; (ii) advanced material, cooling, and manufacturing techniques during the production; (iii) advanced designs and manufacturing for the end-of-life recycling of machine components, especially rare-earth magnets. Significant technological advancements have been achieved during the past two decades, yielding substantial scientific and practical knowledge on this topic.

This special issue intends to collect and report the latest developments of electric machines and drives for battery, hybrid, and fuel cell EVs. Topics of interest include, but are not limited to:

- Advances in modeling and analysis of machines and controls
- Emerging electric machine topologies and associated drives
- Multiobjective, multidisciplinary, and multiphysics optimization of electric machines and drives
- High-speed high-power density machines and drives
- High torque low-speed direct-drive electric motors for in-wheel traction
- Automotive electric traction systems with reduced or no permanent magnets
- Advanced cooling technologies for electric machines and/or power converters
- Electromagnetically-excited noise, vibration, and harshness (e-NVH) issues and solutions
- Advances in materials and manufacturing technologies
- Wide bandgap (WBG) devices and their applications
- Practical issues in PWM converter-driven traction motors
- Advances in design and manufacturing for end-of-life recycling

All manuscripts must be submitted through Manuscript Central at <https://mc03.manuscriptcentral.com/cjee>. Submissions must be clearly marked “**For Special Issue of Advanced Electric Machines and Drives for Battery, Hybrid, and Fuel Cell Electric Vehicles**” on the cover page. The information about manuscript preparation and requirements is provided on <http://www.cjeeccmp.com/EN/column/column334.shtml>. Manuscripts submitted for the special issue will be reviewed separately and will be handled by the guest editorial board noted below.

Deadline for Submission of Manuscript: **Extended to April 20, 2021**

Guest Editors: Ming Cheng, Southeast University, China (mcheng@seu.edu.cn)
 Zhongze Wu, University of Bath, UK (z.wu@bath.ac.uk)
 Peng Han, University of Kentucky, USA (peng.han@uky.edu)

Guest Associate Editors:

- Ayman S. Abdel-Khalik, Alexandria University, Egypt
ayman.abdel-khalik@alexu.edu.eg
- Bahareh Anvari, Infinitum Electric Inc, USA
bahar@infinitumelectric.com
- Hawwooi Chuan, GE Energy Power Conversion, UK
hawwooi.chuan@ge.com
- Lassi Aarniovuori, LUT-University, Finland
lassi.Aarniovuori@lut.fi
- Sadegh Vaez-Zadeh, University of Tehran, Iran
vaezs@ut.ac.ir
- Shuangxia Niu, Hong Kong Polytechnic University, China
shuangxia.niu@polyu.edu.hk
- Somasundaram Essakiappan, University of North Carolina at Charlotte, USA. soma.e@ieee.org
- Xianglin Li, Qingdao University, China
xlcc@126.com
- Xiao Chen, University of Sheffield, UK
xiao.chen@sheffield.ac.uk
- Yasemin Oner, Yildiz Technical University, Turkey
yoner@yildiz.edu.tr

Proposed Timeline:

- **April 20, 2021** – Manuscripts Submission Deadline
- June 30, 2021 – Final Acceptance Notification
- July 31, 2021 – Manuscripts Forwarded to CJEE for Publication
- Aug. 31, 2021 – Special Issue Appears in CJEE