

Call for Papers
IEEE Transactions on Transportation
Electrification (TTE)



Special Issue on Electrified Aircraft Technologies

Driven by ambitious goals for the future of aviation, electrified aircraft propulsion has emerged as a key enabling technology for concepts ranging from hybrid-electric propulsion systems to all-electric aircraft. Rapid advances in electric motors, power converters, and batteries, and related auxiliary systems have energized the industry, leading to the development and ground and flight demonstrations of a range of air transport systems, from vertical take-off and landing (VTOL) to large transport aircraft. The electric VTOL (eVTOL) technology is inspiring revolutionary commuting solutions in metropolitan areas with new Urban Air Mobility (UAM) vehicles and flying cars, while the larger electric transport aircraft address energy usage and environmental issues on a global scale. The electrical components and system have to meet stringent power density, efficiency, and reliability metrics to usher in the new era of electrified aircraft. This special issue aims to publish most recent advancements along this path. Prospective authors are invited to submit manuscripts for review for publication in this special issue.

Original research and practical contributions as well as surveys and state-of-the-art tutorials are welcome. Topics of interest include the following in the context of impact on electrified aircraft:

- Electrified Propulsion System Architectures
- Electrical Energy Generation and Storage (battery, fuel cell, energy harvesters, onboard generation, etc.)
- Electric Power Management and Distribution
- Electric Machines
- Power Electronics
- Superconducting and Cryogenic Systems and Components
- High Voltage Considerations
- Thermal Management
- Propulsion, and Electric System Integration
- System Dynamics, Modeling, and Control
- Failure / Fault Mode Protection, Diagnostics, and Modeling
- Verification, Validation, and Testing
- Safety, Certification, and Standards
- Other Impactful Technologies

Submission of Manuscripts to the Transactions:

All manuscripts must be submitted through Manuscript Central at <http://mc.manuscriptcentral.com/tte-ieee>. Submissions must be clearly marked “Electrified Aircraft Technologies” on the cover page. When uploading your paper, please also select the “Special Issue on Electrified Aircraft Technologies.” Refer to <https://www.ieee-pels.org/publications/ieee-transactions-on-transportation-electrification> for general information about electronic submission through Manuscript Central.

Important Dates:

- Full Paper Submission Deadline: November 30, 2021
- Expected Publication Date: August 2022

Guest Editors:

- Dr. Kiruba Haran, University of Illinois, Urbana-Champaign, USA (kharan@illinois.edu)
- Dr. Kaushik Rajashekara, University of Houston, USA (ksraja@uh.edu)
- Dr. Philip Krein, University of Illinois, Urbana-Champaign, USA (krein@illinois.edu) and Zhejiang University, China
- Dr. Tao Yang, University of Nottingham, UK (tao.yang@nottingham.ac.uk)

Guest Editorial Board:

- Dr. Bahareh Zaghari, Cranfield University, UK
- Dr. Evgeni Ganey, EMPS Consulting, USA
- Dr. Marilena Pavel, TU Delft, Netherlands
- Mr. Chuck Lents, RTRC, USA
- Dr. Mike Filipenko, Rolls Royce, Germany
- Dr. Fang Luo, SUNY Stony Brook, USA
- Dr. Tom Jahns, University of Wisconsin, USA
- Dr. Bulent Sarlioglu, University of Wisconsin, USA
- Dr. Rodger Dyson, NASA, USA
- Dr. Shengyi Liu, Boeing, USA
- Dr. Tim Haugan, AFRL, USA
- Dr. Joe Breit, Boeing, USA
- Dr. Hua Geng, Tsinghua University, China
- Dr. Jean Rivenc, Airbus, France
- Dr. Jin Wang, The Ohio State University, USA
- Dr. Yue Cao, Oregon State University, USA

Editor-in-Chief:

- Dr. Mahesh Krishnamurthy, Illinois Institute of Technology, USA (kmahesh@ece.iit.edu)