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Special Issue on Electrified Aircraft Propulsion

Motivated by the goal of reduced aircraft emissions, the aviation community is actively pursuing the development of Electrified Aircraft Propulsion (EAP) technology. EAP, which uses electricity for the generation of thrust, promises to revolutionize aviation propulsion and has applicability across all aviation sectors. Electrification expands the design space for aircraft propulsion systems and takes many architectural forms. This includes hybrid architectures that combine electrical hardware and fuel-burning gas turbine engines. Multiple design and engineering challenges must be addressed to bring EAP concepts to fruition. This includes developing solutions offering high efficiency and energy density while simultaneously meeting safety, certification, and operational flight environment requirements.

This Special Issue seeks to publish recent technology advances in the field of EAP, particularly in those concepts that include gas turbine engine hardware. Experts from the aviation propulsion community are invited to submit manuscripts covering their contributions to the field of EAP for publication in this Special Issue.

Topic Areas

- EAP architecture concepts and system studies
- System modeling and control
- Fault diagnostics and fault management
- Mechanical interfaces between turbomachinery and motors/generators (drives, gearboxes, transmissions)
- Turbomachinery high-level power extraction and insertion
- Thermal management
- Optimal energy management
- Electric machines (motors and generators)
- Energy storage devices (batteries, supercapacitors)
- Verification, validation, and certification
- Environmental challenges associated with high voltage, high power operation at altitude
- Other related technologies

Publication Target Dates

Paper submission deadline	August 31, 2023
Initial review completed	October 1, 2023
Special Issue publication date	December 2023

Submission Instructions

Papers should be submitted electronically to the journal at journaltool.asme.org. If you already have an account, log in as author and select **Submit Paper** at the bottom of the page. If you do not have an account, select **Submissions** and follow the steps. In either case, at the **Paper Submittal** page, select the [ASME Journal of Engineering for Gas Turbines and Power](#) and then select the Special Issue **Electrified Aircraft Propulsion**.

Papers received after the deadline or papers not selected for inclusion in the Special Issue may be accepted for publication in a regular issue.

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