Special Issue

Power Management for Hybrid Electric Aircraft

Message from the Guest Editor

This Special Issue is dedicated to advancing the scientific understanding and technological development of hybrid-electric propulsion systems since the integration of these energy sources requires innovative architectures, real-time control algorithms, and adaptive management strategies capable of dynamically balancing power flows, maximizing efficiency, and ensuring system robustness under varying flight and environmental conditions. These developments also have profound implications for aircraft design and integration, as power and energy management directly affect the sizing of propulsion components, thermal systems, and structural layouts. Indeed, a critical cross-cutting challenge is thermal management to effectively dissipate the generated heat and maintain performance, safety, and longevity. Advanced cooling concepts, integrated thermal networks, and predictive control are essential to prevent thermal runaway and to ensure stable operation across transient and steady-state regimes.

Guest Editor

Dr. Giuseppe Palaia
Department of Mechanical and Aerospace Engineering, Politecnico di Torino, Corso Duca degli Abruzzi, 24, 10129 Torino, TO, Italy

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Aerospace
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
aerospace@mdpi.com

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Editor-in-Chief

Prof. Dr. Konstantinos Kontis
School of Engineering, University of Glasgow, James Watt Building South, University Avenue, Glasgow G12 8QQ, UK

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