Special Issue

Diagnostics and Fault Tolerance in DC-DC Converters and Related Industrial Electronics Technologies

Message from the Guest Editors

The deployment of DC energy systems is an attractive alternative to conventional AC-based energy distribution systems, improving the efficiency of energy supplies and promoting renewable energies. Within DC energy systems, industrial electronics and particularly DC–DC converters are the key technologies that establish the interface between the multiple individual units of DC energy systems. Semiconductors and electrolytic capacitors, as critical components of DC–DC power converters, are particularly susceptible to suffering faults, which have a critical impact on converter operation. The implementation of diagnostic, prognostic, and fault-tolerant strategies, which are able to effectively deal with the multiple failure modes prone to occurring in DC–DC converters, is a challenging goal and is yet to be fully achieved. This Special Issue focuses on the discussion of emerging solutions suitable for leveraging the availability, reliability, and robustness of DC–DC industrial power electronics technologies.

Guest Editors

Prof. Dr. Antonio J. Marques Cardoso

CISE - Electromechatronic Systems Research Centre, University of Beira Interior, Calçada Fonte do Lameiro, P-6201-001 Covilhã, Portugal

Dr. Fernando Bento

CISE - Electromechatronic Systems Research Centre, University of Beira Interior, Calçada Fonte do Lameiro, P-6201-001 Covilhã, Portugal

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

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Electronics is a multidisciplinary journal designed to appeal to a diverse audience of research scientists, practitioners, and developers in academia and industry. The journal is devoted to fast publication of latest technological breakthroughs, cutting-edge developments, and timely reviews of current and emerging technologies related to the broad field of electronics. Experimental and theoretical results are published as regular peer-reviewed articles or as articles within Special Issues guest-edited by leading experts in selected topics of interest.

Editor-in-Chief

Prof. Dr. Flavio Canavero
Department of Electronics and Telecommunications, Politecnico di Torino, 10129 Torino, Italy

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