



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

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Message from the Guest Editors

Dear Colleagues,

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.





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Message from the Editor-in-Chief

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