



## Challenges and New Trends in Power Electronic Devices Reliability

Guest Editors:

**Prof. Dr. Elio Chiodo**

Department of Industrial  
Engineering, University of Napoli  
"Federico II", Naples, Italy

**Dr. Pasquale De Falco**

Department of Engineering,  
University of Napoli Parthenope,  
80133 Naples, Italy

**Dr. Luigi Pio Di Noia**

Department of Electrical  
Engineering and Information  
Technology, University of Naples  
Federico II, 80125 Napoli, Italy

Deadline for manuscript  
submissions:

**closed (31 January 2021)**

### Message from the Guest Editors

The area of interest of this Special Issue includes the following topics:

- Risk analysis of power electronic devices;
- Forecasting system for the reliability of the components;
- Statistical methods for power electronics reliability evaluation (Bayesian inference, statistical modeling, nonparametric approaches, etc.);
- Accelerated testing for the failure rate estimation;
- Dielectric and thermal stress strength models of power electronics devices;
- High reliability power electronics architecture for electric powertrain;
- Risk analysis of battery storage system under critical condition;
- Fault-tolerant control algorithms based on RAMS logic;
- Predictive maintenance for the condition monitoring of power electronic devices;
- Reliability challenges in smart grid installations.

Welcome to contribute!





an Open Access Journal by MDPI

## Editor-in-Chief

**Prof. Dr. Flavio Canavero**

Department of Electronics and  
Telecommunications,  
Politecnico di Torino, 10129  
Torino, Italy

## Message from the Editor-in-Chief

*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.

## Author Benefits

**Open Access:** free for readers, with article processing charges (APC) paid by authors or their institutions.

**High Visibility:** indexed within Scopus, SCIE (Web of Science), CAPlus / SciFinder, Inspec, Ei Compendex and other databases.

**Journal Rank:** JCR - Q2 (*Physics, Applied*) / CiteScore - Q2 (*Control and Systems Engineering*)

## Contact Us

---

Electronics Editorial Office  
MDPI, Grosspeteranlage 5  
4052 Basel, Switzerland

Tel: +41 61 683 77 34  
[www.mdpi.com](http://www.mdpi.com)

[mdpi.com/journal/electronics](http://mdpi.com/journal/electronics)  
[electronics@mdpi.com](mailto:electronics@mdpi.com)  
[X@electronicsMDPI](https://x.com/electronicsMDPI)