

Special Issue

Advances in Hardware Security and Emerging Threats

Message from the Guest Editor

Recent incidents like the infiltration of hardware Trojans in critical infrastructure supply chains and the proliferation of counterfeit ICs, particularly during the global semiconductor shortage, highlight the urgent need for secure and transparent hardware lifecycles. The Spectre and Meltdown vulnerabilities exposed deep flaws in microarchitectural design, demonstrating how low-level exploits can compromise billions of devices globally. Similarly, side-channel attacks, including those targeting cryptographic systems, have raised concerns about the robustness of existing defenses. The transition to post-quantum cryptography and the adoption of AI, chiplet-based architectures, and cloud platforms introduce new opportunities but also expand the attack surface. For example, recent advances in quantum computing by entities like Google and IBM suggest the potential for breaking traditional cryptographic methods, emphasizing the importance of forward-looking security solutions. The primary objective of this Special Issue is to develop a set of security measures to address the above challenges while exposing new forms of attacks.

Guest Editor

Dr. Basel Halak

Department of Electronics and Computer Science, University of Southampton, Southampton SO17 1BJ, UK

Deadline for manuscript submissions

15 August 2025



Electronics

an Open Access Journal
by MDPI

Impact Factor 2.6
CiteScore 6.1



mdpi.com/si/228293

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

[mdpi.com/journal/
electronics](https://mdpi.com/journal/electronics)





Electronics

an Open Access Journal
by MDPI

Impact Factor 2.6
CiteScore 6.1



[mdpi.com/journal/
electronics](https://mdpi.com/journal/electronics)



About the Journal

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.

Editor-in-Chief

Prof. Dr. Flavio Canavero

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

Author Benefits

High Visibility:

indexed within Scopus, SCIE (Web of Science), CAPus /
SciFinder, Inspec, Ei Compendex and other databases.

Journal Rank:

JCR - Q2 (Engineering, Electrical and Electronic) /
CiteScore - Q1 (Electrical and Electronic Engineering)

Rapid Publication:

manuscripts are peer-reviewed and a first decision is provided to authors approximately 16.8 days after submission; acceptance to publication is undertaken in 2.4 days (median values for papers published in this journal in the first half of 2025).