

## Special Issue

# Security and Privacy Challenges in Integrated IoT and Edge Systems

### Message from the Guest Editors

This Special Issue aims to provide a forum for the latest advances in securing integrated IoT-edge ecosystems. We welcome contributions ranging from theoretical frameworks and algorithmic innovations to system architectures, prototypes, and real-world case studies.

**Topics of interest include, but are not limited to, the following:**

- Lightweight cryptographic and authentication protocols for IoT-edge devices;
- Threat modeling, risk assessment, and vulnerability analysis in IoT-edge environments;
- Privacy-preserving machine learning and federated learning at the edge;
- Blockchain and distributed ledger technologies for IoT-edge security;
- Zero-trust frameworks and adaptive access control in decentralized IoT-edge systems;
- Intrusion detection and anomaly detection using edge AI;
- Adversarial attack detection, model poisoning, and defense in federated edge intelligence;
- Generative AI-enabled threats and AI-driven defenses for IoT-edge networks;
- Digital twin-based security validation and predictive intrusion modeling;
- Self-healing and autonomous recovery mechanisms for resilient IoT-edge infrastructures;
- Zero-knowledge proofs and advanced privacy-preserving protocols for real-time IoT data.

### Guest Editors

Dr. Mikail Mohammed Salim

School of Computer Science and Engineering, Yeungnam University,  
Gyeongsan 38541, Republic of Korea

Dr. Abir EL Azzaoui

GQAS Research Center, Seoul National University of Science and  
Technology, Seoul 01811, Republic of Korea

**Deadline for manuscript submissions**



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Editorial Office  
MDPI, Grosspeteranlage 5  
4052 Basel, Switzerland  
Tel: +41 61 683 77 34  
[electronics@mdpi.com](mailto:electronics@mdpi.com)

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## 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 guestedited by leading experts in selected topics of interest.

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### Editor-in-Chief

Prof. Dr. Flavio Canavero

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

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