

## Special Issue

# AI-Driven Signal Processing and Resource Allocation in Wireless Networks

### Message from the Guest Editor

This Special Issue explores AI-driven signal processing and resource allocation in modern wireless networks. As systems evolve toward 6G, conventional methods face limits in scalability and efficiency. AI and machine learning enable data-driven solutions for channel estimation, interference management, beamforming, spectrum use, and real-time resource scheduling. Topics include

- AI-enhanced physical-layer signal processing
- Machine learning for channel estimation, prediction, and channel state feedback
- Intelligent beamforming, precoding, and MIMO optimization
- Deep learning-based modulation, detection, and decoding
- Reinforcement learning for wireless resource allocation and scheduling
- Federated, distributed, and edge learning architectures for wireless networks
- Energy-efficient and green AI solutions for wireless systems
- AI-driven interference management and power control
- Joint communication, sensing, and computation resource optimization
- Trustworthy, secure, and privacy-preserving AI for wireless networks
- Digital twins and data-driven simulation platforms for wireless communications
- AI-enabled mmWave, THz, RIS-assisted, and massive MIMO communications

We look forward to your contributions.

---

### Guest Editor

Dr. Zuhaib Khan

School of Architecture, Technology, and Engineering (ATE), University of Brighton, Brighton BN2 4AT, UK

---

### Deadline for manuscript submissions

15 July 2026



## Electronics

---

an Open Access Journal  
by MDPI

---

Impact Factor 2.6  
CiteScore 6.1



[mdpi.com/si/263028](https://mdpi.com/si/263028)

*Electronics*  
Editorial Office  
MDPI, Grosspeteranlage 5  
4052 Basel, Switzerland  
Tel: +41 61 683 77 34  
[electronics@mdpi.com](mailto: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 guestedited 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), CAPlus / 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 16.4 days after submission; acceptance to publication is undertaken in 2.6 days (median values for papers published in this journal in the second half of 2025).