

## Special Issue

# 6G and Beyond: Architectures, Challenges, and Opportunities

### Message from the Guest Editor

This Special Issue invites contributions addressing categories including, but not limited to, the following:

- Architectures and Enabling Technologies: AI-native networks, terahertz communication, and RIS integration;
- "AI-Empowered Communication Systems and Intelligent Interactions";
- Spectrum and Resource Management: Dynamic allocation, hybrid RF-optical systems, and massive MIMO;
- Energy Efficiency and Sustainability: Green networking, energy harvesting, and low-carbon designs;
- Security, Privacy, and Trust: Post-quantum cryptography, quantum-secured networks, and decentralized frameworks;
- Optical Communication and Networking: Ultra-high-speed links, photonic integration, FSO, and elastic optical networks;
- Advanced Use Cases and Applications: Holographic telepresence, digital twins, XR, and smart cities;
- Optical Access and Edge Networks: Fiber-to-the-edge, PON advancements, and edge-cloud integration;
- Testing, Simulation, and Prototyping: Optical and wireless convergence testbeds and 6G-ready prototypes.

### Guest Editor

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### Deadline for manuscript submissions

15 January 2026



## Electronics

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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 guest-edited by leading experts in selected topics of interest.

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### Editor-in-Chief

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