

Special Issue

AI-Empowered Communications: Towards a Wireless Metaverse

Message from the Guest Editors

The impending Metaverse, as an emergent product of the convergence of diverse technologies—encompassing extended reality (XR), artificial intelligence (AI), and beyond—necessitates the synergistic integration of these technological domains to materialize a "second life" ecosystem. This Special Issue aims to bring together the leading researchers in the field, both from academia and industry, to exchange their views on Semantic Communications towards the Wireless Metaverse. In this Special Issue, original research articles and reviews are welcome. Research areas may include (but are not limited to) the following:

- Cross-layer interaction/optimization for wireless networks
- Quality of experience (QoE) evaluation
- Network architectures and protocols for semantic communications
- Semantics-aware sampling and transmission policy
- Joint semantic/feature and channel coding
- End-to-end communications
- Knowledge-driven semantic language and representation
- Intelligent transceiver in wireless Metaverse
- Data-driven optimization and applications to wireless network design
- Data and model privacy in AI/ML solutions for wireless systems

We look forward to receiving your contributions.

Guest Editors

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Deadline for manuscript submissions

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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.

Editor-in-Chief

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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).