

## Special Issue

# AI-Powered Edge Computing for Next-Generation Communication Networks

### Message from the Guest Editors

AI-powered edge computing has emerged as a transformative enabler, providing distributed intelligence at the network edge to optimize resource utilization, automate operations, and facilitate the seamless integration of these demanding applications into next-generation communication networks. In this Special Issue, original research articles and reviews are welcome. Research areas may include (but are not limited to) the following:

- AI-driven optimization for latency- and reliability-demanding applications (e.g., XR, autonomous vehicles, and industrial IoT).
- Machine learning-based resource management for 5G/6G edge networks.
- Real-time analytics and decision-making frameworks at the edge.
- Network slicing and orchestration powered by AI for demanding use cases.
- Predictive modeling for network conditions and application performance.
- AI-enabled energy-efficient and secure edge computing solutions.
- Applications of edge AI for smart cities, healthcare, and Industry 4.0.
- Distributed machine learning approaches for edge AI.

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### Guest Editors

Dr. Georgios P. Koudouridis  
Prof. Dr. Sotirios K. Goudos  
Dr. Panagiotis Sarigiannidis

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### Deadline for manuscript submissions

closed (15 September 2025)



## Electronics

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*Electronics*  
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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