# **Special Issue**

# Evolution of Physical-Layer-Security-Enhanced Wireless Communications Towards 6G

### Message from the Guest Editors

The advent of 6G wireless communication networks promises to revolutionize the way we interact in the digital world, as well as the real world. This Special Issue aims to explore the evolution of physical-layer-security-enhanced wireless communications in the context of 6G. Topics of interest include (but are not limited to) the following:

- Innovative physical-layer security protocols and mechanisms tailored for 6G;
- Secure waveform design and modulation techniques for 6G:
- Physical-layer authentication and key management in 6G networks;
- Quantum-inspired approaches to physical-layer security for 6G;
- Machine learning and Al-driven solutions for enhancing physical-layer security in 6G;
- Cross-layer design methodologies for integrating physical-layer security in 6G systems;
- Experimental studies and testbed implementations of physical-layer security in 6G environments;
- Performance analysis and evaluation of physical-layer security solutions for 6G;
- Integration of physical-layer security with emerging 6G technologies (e.g., terahertz communications, massive MIMO, etc.);
- Privacy-preserving techniques and anonymity in 6G wireless communications.

### **Guest Editors**

Prof. Dr. QingHe Du

School of Information and Communications Engineering, Xi'an Jiaotong University, Xi'an 710049, China

Dr. Xiao Tang

School of Information and Communication Engineering, Xi'an Jiaotong University, Xi'an 710049, China

### Deadline for manuscript submissions

closed (31 October 2025)



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### About the Journal

### Message from the Editor-in-Chief

Network provides full coverage of all topics of interest involved in the networking area. The purpose of this journal is to bring together researchers, engineers, and students from academia and industry to present novel ideas and solid research about the theoretical and practical aspects in the application domains of communications and networks. The primary focus of the journal is on the analysis, modeling, design, simulation, and implementation of networks. This journal will also serve to attract research concerning applying networking architectures and scenarios to emerging research topics such as Internet of Things (IoT), edge computing, distributed ledger technology, among others.

### **Editor-in-Chief**

Prof. Dr. Alexev Vinel

School of Information Technology, Halmstad University, 301 18 Halmstad, Sweden

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