

Special Issue

New Insights into Network Security in the AI and Quantum Era

Message from the Guest Editor

The convergence of artificial intelligence (AI) and quantum computing (QC) is reshaping the future of network security. AI technologies such as deep learning, reinforcement learning, and autonomous threat detection are now central to cybersecurity strategies, enabling real-time anomaly detection, predictive analytics, and adaptive defense mechanisms. Simultaneously, the advent of quantum computing presents both opportunities and profound threats, rendering traditional cryptographic systems vulnerable while opening new frontiers in quantum-safe encryption and quantum key distribution. This Special Issue aims to present cutting-edge research, novel methodologies, and practical applications at the intersection of AI, QC, and cybersecurity.

This Special Issue seeks to bring together interdisciplinary perspectives from academia and industry to address the emerging challenges and opportunities relating to securing networks in the AI and quantum era.

Keywords

- artificial intelligence in cybersecurity
- quantum network security
- post-quantum cryptography
- AI-based intrusion detection
- quantum-safe communication
- machine learning for threat modeling
- hybrid AI-quantum approaches

Guest Editor

Dr. Hassan Soubra

Department of Computer Engineering, Ecole Centrale d'Electronique-ECE Lyon, 24 rue Salomon Reinach, 69007 Lyon, France

Deadline for manuscript submissions

10 February 2026



Applied Sciences

an Open Access Journal
by MDPI

Impact Factor 2.5
CiteScore 5.5



mdpi.com/si/246688

Applied Sciences
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
appls@mdpi.com

mdpi.com/journal/

[appls](https://appls.mdpi.com)





Applied Sciences

an Open Access Journal
by MDPI

Impact Factor 2.5
CiteScore 5.5



[mdpi.com/journal/
applsci](https://mdpi.com/journal/applsci)



About the Journal

Message from the Editor-in-Chief

As the world of science becomes ever more specialized, researchers may lose themselves in the deep forest of the ever increasing number of subfields being created. This open access journal Applied Sciences has been started to link these subfields, so researchers can cut through the forest and see the surrounding, or quite distant fields and subfields to help develop his/her own research even further with the aid of this multi-dimensional network.

Editor-in-Chief

Prof. Dr. Giulio Nicola Cerullo
Dipartimento di Fisica, Politecnico di Milano, Piazza L. da Vinci 32,
20133 Milano, Italy

Author Benefits

Open Access:

free for readers, with article processing charges (APC) paid by authors or their institutions.

High Visibility:

indexed within Scopus, SCIE (Web of Science), Ei Compendex, Inspec, CAPlus / SciFinder, and other databases.

Journal Rank:

JCR - Q2 (Engineering, Multidisciplinary) / CiteScore - Q1 (General Engineering)