

## 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

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**Deadline for manuscript submissions**



## Applied Sciences

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CiteScore 5.5



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### 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.

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### Editor-in-Chief

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