Special Issue

Advances in Cryptography for IoT in the Era of Quantum Computing

Message from the Guest Editors

The rapid expansion of the Internet of Things (IoT) has transformed industries by enabling seamless connectivity and automation. However, this interconnected ecosystem is highly vulnerable to cyber threats due to the resource constraints of IoT devices, their large attack surface, and the reliance on traditional cryptographic mechanisms that may not be optimized for constrained environments. This Special Issue aims to address the emerging challenges in IoT security by exploring cutting-edge cryptographic techniques tailored for constrained IoT devices, both in classical and post-quantum contexts. Topics of interest include (but not limited to) the following:

- Lightweight cryptographic protocols;
- Quantum-resistant key exchange mechanisms;
- Blockchain-based security frameworks;
- Homomorphic encryption for secure IoT data processing;
- IoT hardware security;
- Hybrid security models that integrate classical and quantum-safe techniques.

Guest Editors

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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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