

Special Issue

Authentication in Key-Exchange: Definitions, Relations, Composition and Post-Quantum Security

Message from the Guest Editors

This Special Issue, “Authentication in Key-Exchange: Definitions, Relations, Composition and Post-Quantum Security”, focuses on both classical and emerging perspectives on authentication within key-exchange protocols. It aims to clarify the fundamental definitions, security concepts, and compositional properties of authentication and key-exchange and the relationships between them, thereby providing a unified and rigorous foundation for secure protocol design.

In addition to traditional models, this Special Issue places particular emphasis on post-quantum-resistant authentication mechanisms and key-exchange protocols. As global cryptographic standards transition toward post-quantum algorithms, understanding how authentication interacts with modern KEM-based, signature-based, and hybrid PQ key-exchange constructions has become essential. Submissions exploring the adaptation of classical authentication notions to the post-quantum setting, security proofs under quantum adversaries, and quantum-aware composability frameworks are especially welcome.

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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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