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Number Theory and Science of Secure Communications

Plenary Talk

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Abstract

Number theory plays an important role in making our communications secure. In fact almost all Public Key Cryptosystems are based on number theoretic ideas. In this talk, I will give an overview of cryptography from the perspective of number theory and challenges in the threat of AI and Quantum computers and the way forward.

Keywords: Public Key Cryptography, Computational Number Theory, Post-Quantum Cryptography, Cryptographic Security, AI and Quantum Threats