

Title: Some applications of mathematics in cryptography

My talk will give an historical overview of how mathematics has enabled breakthroughs in cryptography, which have in turn inspired developments in mathematics and unexpected real-world applications. I will start with the invention of public key cryptography in the 1970s. The talk will then cover topics such as the introduction of elliptic curve cryptography, pairing-based cryptography, homomorphic encryption, post-quantum cryptography, and indistinguishability obfuscation.