

Quarkz Encryption

Larson-Robertson, Tavian (School: Nampa Christian High School)

Quarkz is an algorithm I have created which solves both personal and national cybersecurity issues with upcoming quantum supremacy. Quarkz is based on RSA encryption, which can be decrypted extremely fast by quantum computers using Shor's algorithm. Quarkz is a parent/child key operation that can both encrypt and decrypt data using RSA as a foundation. It uses operations from both Beal's conjecture and modular arithmetic to eliminate sending the variable in the public key that Shor's algorithm uses to decrypt RSA. This keeps all data sent over any network private, despite the computational power of quantum computers. Applying the mathematics behind Quarkz in a python program I can accurately encrypt text using the public key, then decrypt it using the private key. Looking forward, I want to work with a mentor to improve Quarkz encryption in order to contract it to agencies such as the CIA and NSA.