Quantum Computing & Cryptography

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Post-Quantum Cryptography

- NIST = National Institute of Standards and Technology
- Standardizing one or more guantum-resistant public-key cryptographic algorithms
- For use on classical computers
- Must be resistant to classical and quantum computing attacks
- Second-round candidate algorithms include:
 - 17 public-key encryption and key-establishment algorithms
 - 9 algorithms for digital signatures
- "A wide range of mathematical ideas are represented by these algorithms... to hedge against the possibility that if someone breaks one, we could still use another."
- <u>pgcrypto.org</u> Dan Bernstein's post-guantum cryptography resources

NIST Post-Quantum-Cryptography-Standardization

NIST Reveals 26 Algorithms Advancing to the Post-Quantum Crypto 'Semifinals'