

Kacper Zujko

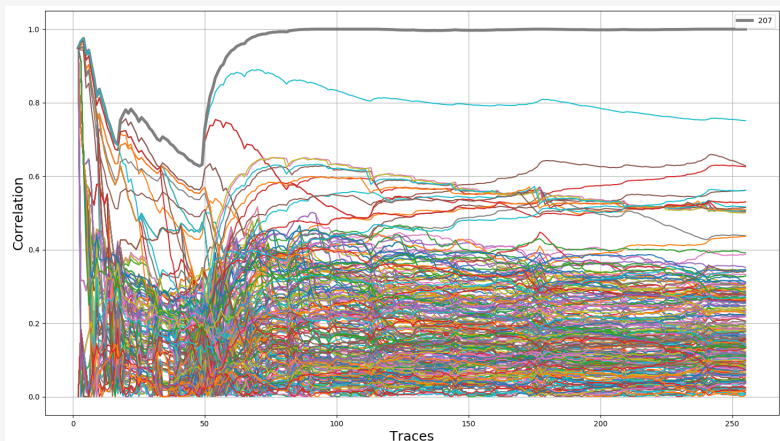
Military University of Technology

18 June 2019

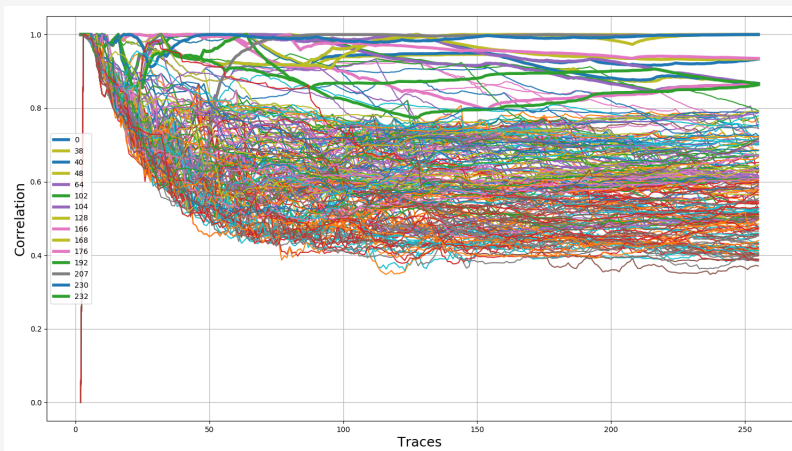
Some topics

- key distribution, PKI (centralized and decentralized)
- lattice-based crypto
- hash-based crypto
- side channel analysis (power, EM, cache)
- other exploitation and protecting methods

Exact point, XMSS SHA-256 PRNG (addition)



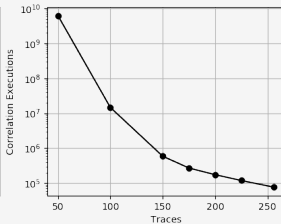
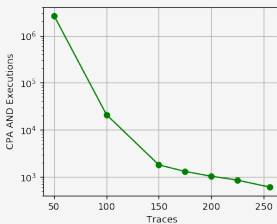
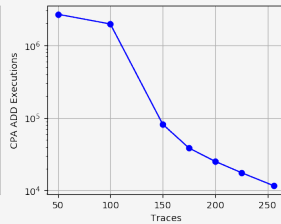
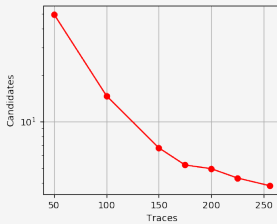
500 points, XMSS SHA-256 PRNG (addition)



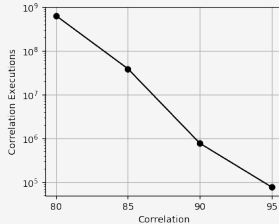
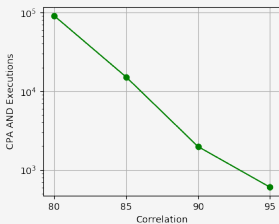
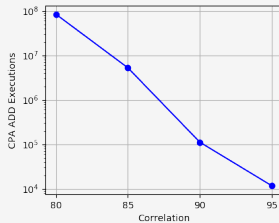
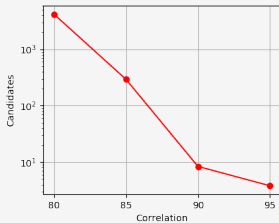
Small improving for sha256(i) \rightarrow i

- 1 Exploit Σ_0 and Σ_1 .
- 2 Divide strategy (CH and MAJ).
- 3 Deal with no/small differences.

Exact point



Exact point



500 points, 256 traces

Candidates	CPA ADD	CPA AND	Correlation Verification
103,72	17 006 077	41 607	255 588 774