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XMSS - A Practical Forward Secure Signature Scheme based on Minimal Security Assumptions

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Abstract: We present the hash-based signature scheme `\xmss`. It is the first provably (forward) secure and practical signature scheme with minimal security requirements: a pseudorandom and a second preimage resistant (hash) function family. Its signature size is reduced to less than 25% compared to the best provably secure hash based signature scheme.

Category / Keywords: public-key cryptography / digital signature, practical, minimal security assumptions, hash-based signatures, forward security, provable security

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