

Titre: Eigen-Fingerprints-Based Remote Authentication Cryptosystem.

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Abstract

Nowadays, biometric is a most technique to authenticate /identify human being, because its resistance against theft, loss or forgetfulness. However, biometric is subject to different transmission attacks. Today, the protection of the sensitive biometric information is a big challenge, especially in current wireless networks such as internet of things where the transmitted data is easy to sniffer. For that, this paper proposes an Eigens-Fingerprint-based biometric cryptosystem, where the biometric feature vectors are extracted by the Principal Component Analysis technique with an appropriate quantification. The key-binding principle incorporated with bit-wise and byte-wise correcting code is used for encrypting data and sharing key. Several recognition rates and computation time are used to evaluate the proposed system. The findings show that the proposed cryptosystem achieves a high security without decreasing the accuracy.