



BIOMETRIC TEMPLATE SECURITY: CHALLENGES AND SOLUTIONS (MonPmOR4)

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★ Abstract :

A biometric system is vulnerable to a variety of attacks aimed at undermining the integrity of the authentication process. These attacks are intended to either circumvent the security afforded by the system or to deter the normal functioning of the system. We describe the various threats that can be encountered by a biometric system. We specifically focus on attacks designed to elicit information about the original biometric data of an individual from the stored template. A few algorithms presented in the literature are discussed in this regard. We also examine techniques that can be used to deter or detect these attacks. Furthermore, we provide experimental results pertaining to a hybrid system combining biometrics with cryptography, that converts traditional fingerprint templates into novel cryptographic structures.