

Multimodal Biometric system Fusion Using Fingerprint and Iris with fuzzy logic

Mohamad Abdolahi, Majid Mohamadi, Mehdi Gafari

Abstract — Single biometric systems have a variety of problems such as noisy data, non-universality, spoof attacks and unacceptable error rate. These limitations can be solved by deploying multimodal biometric systems. Multimodal biometric systems utilize two or more individual modalities, like face, iris, retina and fingerprint. Multimodal biometric systems improve the recognition accuracy more than uni-modal methods. In this paper, two uni-modal biometrics, iris and fingerprint are used as multi-biometrics and show using this biometrics has good result with high accuracy. Decision level is used for fusion and each biometric result is weighted for participate in final decision. Fuzzy logic is used for the effect of each biometric result combination.

Index Terms— fingerprint recognition, Iris recognition, , minutiae extraction, multi-biometric.