

Biometric Consortium 2006 Conference

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Topic: When To Fuse Two Biometrics

Abstract: Biometric fusion, acquisition and combination of multiple pieces of evidence of identity, can achieve higher accuracy of biometric recognition than using a single biometric. However, fusion increases the cost or throughput of the system since it requires acquisition and processing of more samples. This talk presents a procedure for contingent fusion. That is, two biometrics are fused only if verification on the first presented biometric is rejected. Results are presented for both decision and score level fusion, while combining two different algorithms, two different modalities, and two different instances of a biometric.

Biography: Elham Tabassi is a staff member at National Institute of Standards and Technology working on various biometric research projects including biometric sample quality, fusion, and performance assessment. She developed the NIST Fingerprint Image Quality (NFIQ), which has won national and international acceptance and has become a de facto standard, it is included in the Electronic Fingerprint Transmission Specification (EFTS), which is a required standard for doing business with the FBI been adopted by FBI to assess quality of slap fingerprints. Elham Tabassi received her Master of Science Degrees in Electrical Engineering from Santa Clara University in 1994. She received the Department of Commerce Gold Medal in 2003 for her work on biometric system performance assessment. Her research interests are in biometrics technology, biometric sample quality, pattern recognition, data mining, and signal processing.