

Assessment of Biometric Robustness Against Spoof Attacks

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- Previous work: “***Robustness of Multimodal Biometric Fusion Methods against Spoof Attacks***”; Journal of Visual Languages and Computing, 2009.
 - Fusion takes into consideration the security of each unimodal system.
 - How to measure the intrinsic robustness of a biometric system?
 - So far this assessment has been subjective (e.g. low, medium, high)
 - Or measured via performance evaluation (FAR,FRR) with spoofed samples.

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- Proposed method:
 - Based on information theory.
 - Loss of discriminative information (LDI):
$$LDI = KL(p_i || p_g) - [KL(p_s || p_g) - KL(p_s || p_i)]$$
 - Takes into consideration the spoofing time (TTS)
 - Qualitative assessment:

