MULTIMODAL BIOMETRIC SCORE FUSION: THE MEAN RULE VS. SUPPORT VECTOR CLASSIFIERS (ThuPmOR6)

Author(s):
Lorène Allano (Institut National des Télécommunications, France)
Sonia Garcia-Salicetti (Institut National des Télécommunications, France)
Mohamed Anouar Mellakh (Institut National des Télécommunications, France)
Bernadette Dorizzi (Institut National des Télécommunications, France)

Abstract:
Recently, a discrepancy in results has appeared in the literature concerning score fusion methods, classified in “combination methods” and “classification methods” [1]. Some works suggest that a simple Arithmetic Mean Rule (AMR) can outperform some training-based methods on multimodal data [2], while others favour, among other trained classifiers, a Support Vector Machine [3]. This paper makes a comparative study of the Arithmetic Mean Rule (AMR) coupled with different state-of-the-art normalization techniques [4, 5] and a linear Support Vector Machine (SVM), in the framework of voice and on-line signature scores fusion. Two experiments differing in the difficulty to discriminate genuine from impostor accesses are carried out on the BIOMET database [6].