An improved palm vein recognition system using multimodal features and neural network classifier has been developed and presented in this paper. The effects of fusion of multiple features at various levels have been demonstrated. The shape and texture features have been considered for recognition of authenticated users and it is validated using neural network classifier. The recognition accuracy of the proposed system has been compared with the existing techniques. It is found that the recognition accuracy is 99.61% when the multimodal features fused at matching score level. This proposed multimodal palm vein recognition system is expected to provide reliable security.
An Enhanced Palm Vein Recognition System Using Multi-level Fusion of Multimodal Features and Adaptive Resonance Theory


Index Terms

Computer Science

Pattern Recognition

Key words

Palm vein recognition

Multimodal Biometrics

Feature subset selection
ASFFS

FAR
FRR