



RESEARCH ARTICLE

Improved Human Identification using Finger Vein Images

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Abstract— *Finger vein is a unique physiological biometric for identifying individuals based on the physical characteristics and attributes of the vein patterns in the human. The technology is currently in use or development for a wide variety of applications, including credit card authentication, automobile security, employee time and attendance tracking, computer and network authentication, end point security and automated teller machines. The proposed system simultaneously acquires the finger-vein and low-resolution finger image images and combines these two evidences using a novel score-level combination strategy. Examine the previously proposed finger-vein identification approaches and develop a new approach that illustrates its superiority over prior published efforts. In this thesis developed and investigated two new score-level combinations, i.e., Gabor filter, Repeated Line Tracking with Median filter and comparatively evaluate them with more popular score-level fusion approaches to ascertain their effectiveness in the proposed system.*

Index Terms— *Feature Extraction; Finger Vein Recognition System; Gabor Filter; Repeated Line Tracking; Median Filter*

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