



RESEARCH ARTICLE

ACTIVITY BASED PERSON IDENTIFICATION USING PARTICLE SWARM OPTIMIZATION ALGORITHM

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Abstract— This paper presents a generic non-invasive person identification method that exploits discriminative power of different activities performed by the same person. A multi-camera setup is used to capture the human body from different viewing angles. Person identification, activity recognition, and viewing angle specification results are obtained for all the available cameras independently. Utilizing a particle swarm optimization (PSO) and linear discriminant analysis (LDA) based algorithm, an unknown movement is first classified, and, then, the person performing the movement is recognized from a movement specific person classifier. Human identification performance of the proposed scheme is found to be quite good when tested on publically available databases.

Key Terms: - Person identification; activity recognition; particle swarm optimization; linear discriminant analysis
