

综述与评论

掌纹识别算法综述

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摘要

掌纹识别作为一种新兴的生物识别技术, 近年来得到了广泛的关注与研究. 与其他生物特征相比, 掌纹有许多独特的优势, 包括识别率高、采集设备价格低廉、用户可接受性好等. 这些优势使得掌纹识别成为一种有着广泛应用前景的生物识别方法. 本文首先介绍了掌纹的特点、掌纹的采集设备和预处理方法, 之后详细介绍了近几年来提出的各种掌纹识别方法. 根据特征提取以及匹配方法的不同, 本文将掌纹识别方法分为基于结构的、基于子空间的、基于编码的和基于统计的四类方法. 在回顾和比较了各种算法的特点之后, 对未来的掌纹识别方法的发展方向作了展望.

关键词 [生物识别](#) [掌纹识别](#) [低分辨率掌纹图像](#) [特征提取](#) [特征匹配](#)

分类号

Survey of Palmprint Recognition Algorithms

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Abstract

As an emerging biometric technology, palmprint recognition has recently received considerable research interest. Because of its low-price capture device, fast execution speed, and high verification accuracy, palmprint recognition is very competitive in biometric research and is expected to have a wide range of security applications. This paper first introduces the characteristics of the palmprint, the acquisition and the preprocessing method for palmprint image, and then presents a survey of the palmprint recognition algorithms. According to different feature extraction and matching approaches, we roughly group these algorithms into four categories: structure based, statistics based, subspace based and coding based methods. After surveying and comparing these algorithms in each category, we conclude this paper with a discussion of future trends.

Key words [Biometrics](#) [palmprint recognition](#) [low-resolution palmprint image](#) [feature extraction](#) [feature matching](#)

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