



Optica Applicata 2009(Vol.39), No.2, pp. 365-374

Efficient iris segmentation method with support vector domain description

Rongnian Tang, Jiuqiang Han, Xinman Zhang

SEARCH

[Advanced search](#)

Keywords

iris segmentation, local geometric moment, support vector domain description (SVDD), border recognition

Abstract

With the aim to improve the performance of iris segmentation method to process images with heterogeneous characteristics, the authors introduce a new method inspired by the support vector domain description (SVDD). A local geometric moment function is used to extract shape features of the iris borders. Then, these features are fed into the trained SVDD classifier for borders recognition followed by the application of Hough transform to solve circumference parameters of iris. The performance of the proposed method and the most cited methods, Daugman's method and Wilders' method, had been tested on the UBIRIS database. Compared with the two existing methods, our proposal is not only comparable to them when the iris image has good quality, but has better segmentation performance in the case of poor quality images. The experimental results show that the method proposed does have a higher robustness and is less dependent on the quality of raw iris image.



Adobe 163.7 kB

[Back to list](#)

© Copyright 2007 T.Przerwa-Tetmajer All Rights Reserved 2007

stat4u

About Optica Applicata

Current issue

Browse archives

Search

Editorial Board

Instructions for Authors

Ordering

Contact us

