

论文

基于B样条FFD模型配准的虹膜图像融合方法

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摘要:

通过摄像头得到的虹膜图像的纹理通常是模糊的,不能直接用于虹膜识别。但是由于虹膜纹理会随着瞳孔的缩放发生非刚性形变,直接对虹膜图像融合无法得到良好的效果。本文采用基于B样条的FFD(free-form deformation)模型对图像进行配准,然后用小波进行融合,为下一步的虹膜识别提供了合适的图像。通过该方法得到的融合图像直观上细节信息更多,并通过熵进行了度量。

关键词: 虹膜图像 B样条FFD模型 图像融合 图像配准

A method based on FFD B-spline registration of the iris image fusion

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Abstract:

Images collected by camera are usually blur and can not be used directly for iris recognition. However, as the iris texture may occur as the pupil of scaling of non-rigid deformation, direct image fusion does not work well. Firstly the B-spline free-form deformation model was used in this paper to register images, then the wavelet transform was employed in image fusion. Entropy was performed to judge the results of fusion. It was showed that the method was efficient and the image after fusion was intuitively detailed.

Keywords: iris image FFD B-spline image registration image fusion

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