

一种基于互信息的图像配准算法

作者: 郭佳, 李辉, 王成, 李思众

单位: 西安应用光学研究所

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摘要:

针对红外和可见光图像的特性, 提出了一种基于互信息的图像配准算法。该算法采用互信息作为红外和可见光图像的统计相关性测度, 并使用仿射模型实现两者的配准。实验结果表明, 该算法能够较好的进行图像间尺度、旋转和平移差别的修正, 可以很好地解决成像差异较大的红外与可见光图像间的配准问题。

关键词: 图像配准; 互信息; 仿射模型; 图像信息熵; 联合熵

An Image Registration Algorithm Based on Mutual Information Theory

Author's Name:

Institution:

Abstract:

According to the characteristics of infrared and visible images, an image registration algorithm based on mutual information theory has been presented. The mutual information of images is used as a statistical correlation measurement, in order to register infrared and visible images with affine transformation model. The experimental result shows that the algorithm can effectively correct the scale, rotation and translation difference of two images, and it can be a good solution to register infrared and visible images which have large difference of imaging.

Keywords: image registration, mutual information, affine transformation model, entropy, joint entropy

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