博士论坛

基于彩色的SIFT特征点提取与匹配

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摘要　　由于只是利用图像的灰度信息，SIFT算法不能很好地区分形状相似但颜色不同的物体。针对这一问题，提出了一种基于彩色的SIFT特征点提取算法，并着重分析了多种彩色模型对算法性能的影响。这种算法也是在图像的灰度尺度空间上检测特征点，但其特征向量由各描述子子区域的彩色模型分量的均值组成并在原始的彩色图像上进行计算。实验结果证明了该算法的有效性。

关键词　　特征点提取　特征匹配　彩色模型　SIFT方法

分类号

Color-based SIFT feature point detection and matching

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Abstract

　Because only the gray scale information is utilized，the SIFT method can't differentiate the objects with similar shape but with different colors commendably.In order to solve such problem，presents a color-based SIFT feature point detecting method and analyzs the method's performance in terms of different color models.The method detected interest points in the gray image scale space，and its eigenvectors are composed of the mean values of different color model components in each subregion and are computed based on the original color images.The experimental results have proved its validity.

Key words　feature point detection　feature matching　color model　SIFT method

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