基于分块 Radon 尺度变换信息增强的图像融合技术

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摘　要：在对目标图像采集模糊性较强或者姿态变化幅度较大的情况下，目标准确识别精度不高，为了提高目标图像的准确识别率，提出一种基于分块 Radon 尺度变换信息增强的图像融合技术进行目标识别的方法.对采集的模糊目标图像进行小波降噪处理，对降噪输出的图像进行自适应模板匹配，结合图像分割方法将目标图像进行分块，利用 Radon 尺度变换的几何特征不变性对目标的关键特征点进行信息增强,实现特征点优化提取和目标准确辨识.以实际采集的光学图像和对地遥感图像为测试样本进行实验分析，仿真结果表明，采用该方法进行图像融合处理，提高了成像质量，对图像目标融合识别的准确性较好，且能满足大批量样本目标快速识别的应用需求.

关键词：Radon 尺度变换；分块；图像；目标识别；降噪

Image Fusion Technology Based on Block Radon Scale

Transform Information Enhancement

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Abstract：In the target image acquisition of fuzzy strong or attitude change greatly under the condition of accurate target recognition accuracy is not high, in order to improve the accuracy of target image recognition rate, we propose an image block Radon transform enhanced information fusion technology. The target recognition based on fuzzy objective image wavelet denoising image processing the noise output of the adaptive template matching, image segmentation method combined with the target image is divided into blocks, using geometric invariant feature Radon wavelet transform key feature points on the target information enhancement, realize the feature points extraction and optimization target. To accurately identify the optical remote sensing image collected as test samples for experimental analysis, simulation the results show that using the method of image fusion, improve the image quality, the image fusion of target recognition with good accuracy, And it can meet the application requirements of the rapid identification of the large number of samples.

Key words：radon scale transform; block; image; target recognition; noise reduction

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