

产品、研发、测试

基于离散小波变换的织物疵点检测方法

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摘要 提出了一种基于离散小波变换的织物疵点检测新方法。首先通过对采集织物图像进行小波变换, 然后把子图分割为相互连接、互不交叠的子窗口, 计算每个子窗口小波系数的标准差作为特征值, 最后对这些特征值再次计算标准差与极差, 以此作为依据与正常织物进行比较, 实现对织物疵点的检测。通过对不同疵点进行检测实验, 证明了该算法是可行有效的, 检测的正确率平均可达90%以上。

关键词 [小波变换](#) [疵点检测](#) [纹理](#) [织物](#)

分类号

Fabric defect detection method based on discrete wavelet transform

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Abstract

An innovative method for fabric defect detection using discrete wavelet transform is put forward. Firstly, acquiring fabric images is decomposed into four sub-images by wavelet transform. Secondly, after sub-images segmented into many sub-windows without overlapping, standard deviation of those sub-windows are calculated as features. Lastly, standard deviation and largest deviation of those features are calculated again. Fabric defects are detected by differences of standard deviation and largest deviation between image with default and image without default. Validity and feasibility of this method is proved by detected different fabric defect in our experiment, and the detection average accuracy is above 90%.

Key words [wavelet transform](#) [defect detection](#) [texture](#) [fabric](#)

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