

基于灰色关联分析和区域生长的微小缺陷提取

王中宇 付继华 孟浩 杨文平

北京航空航天大学

关键词: 缺陷提取 机器视觉 图像分割 区域生长算法 灰色关联分析

摘要: 提出了一种基于灰色关联分析的区域生长算法。首先通过计算二维灰色绝对关联度,将原始图像转换为仅包含高频信息的灰色关联图像,并在此基础上进行阈值处理和区域标记,获得缺陷区域的形心。然后将该形心作为种子像素在灰色关联图像内进行区域生长,实现微小缺陷的在线提取。实验结果表明,新的区域生长算法能够有效地抑制背景噪声、简化计算过程,满足在线提取和实时性要求。A region growing algorithm based on the grey relational analysis was proposed. By means of calculating the two-dimension grey absolute relational grade, the original image was turned to a grey relational image only containing the edge information. Meanwhile, by the region marking of the grey relational image, the centers of small defects were obtained. And these centers were used as the seeds pixels to do the region growing and the detect extracting in the grey relational image. The experimental results indicated that the new region growing algorithm could suppress the background noise, simplify the calculating process, and meet the requirements of the real time extracting effectively.

[查看全文](#) (请使用Adobe Acrobat 6.0版本浏览) [返回首页](#)

[引用本文](#)