Abstract

Automatic fabric inspection is important for maintaining the fabric quality. For a long time, the fabric defects inspection process is still carried out with human visual inspection, and thus, insufficient and costly. Hence, the automatic fabric defect inspection is required to reduce the cost and time waste caused by defects. The development of fully automated web inspection systems requires robust and efficient fabric defect detection algorithms. The detection of local fabric defects is one of the most intriguing problems in computer vision. Texture analysis plays a crucial role in the automated visual inspection of texture images to detect their defects. The main aim of this study is to find independent components of the Regular Bands method of the patterned fabric images for the purpose of defect detection. In this paper, Independent Component Analysis (ICA) is proposed as a method that solves the problem of defect detection in patterned fabrics prior to Regular Bands (RB) method. Patterned fabric is built on the repetitive unit of its design. RB is an existing method that is based on periodicity. The proposed method ICA along with RB method tries to improve the efficiency and quality of the fabric with less time.
ences

- F. Acebrón, F. López, J.M. Valiente, J. R. Navarro,”Surface Defect Detection on Fixed Patterns Ceramic Tiles”.
- Ajay Kumar,” Computer vision-based Fabric Defect Detection-A Survey”.

Index Terms

Computer Science Pattern Recognition

Keywords
Patterned fabric detection defect detection Regular Band Independent Component
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