

图形、图像、模式识别

## 利用小波域同态滤波的伪造图像检测方法

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**摘要** 针对伪造图像中常用的模糊操作, 提出一种伪造图像的检测方法, 该方法首先对伪造图像进行小波域同态滤波, 增强处于高频段的人为模糊边缘, 然后利用数学形态方法腐蚀掉自然边缘, 保留增强的模糊边缘, 最后对腐蚀后的边缘图像进行区域标定, 从而定位出伪造区域。实验证明该算法相对基于传统同态滤波伪造检测方法, 能够较准确定位伪造区域, 降低误检率。

**关键词** [小波同态滤波](#) [伪造图像检测](#) [模糊边缘](#)

**分类号** [TP391](#)

## Digital forgery image detection method using wavelet homomorphic filtering

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### Abstract

A novel forgery image detection algorithm is proposed to recognise some traces of artificial blur operation that is one of common ways to forge an digital image. Firstly, a wavelet homomorphic filtering is applied to enhance the high frequency edges after the blurring process. Secondly, the natural edges are eroded by mathematical morphology method, then the enhanced artificial blur edges are preserved. Finally, the forgery image regions are detected by the region labeling method. Experimental results demonstrate the superiority of this proposed method over the traditional homomorphic filtering method. In addition, it can detect forgery area accurately and reduce the detecting errors.

**Key words** [wavelet homomorphic filtering](#) [digital forgery image detection](#) [blur edges](#)

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