Abstract

Image processing supports applications in different fields such as medicine, astronomy, product quality, industrial applications. Edge detection plays important role in segmentation and object identification process. Soft computing approach represents a good mathematical framework to deal with uncertainty of information. The performance of the well-known edge detectors, like Canny, Sobel, etc, depends critically on the choice of the input parameters. Threshold decision is the key uncertainty in the edge detection algorithms. In this paper, an improved edge detection algorithm based on fuzzy combination of mathematical morphology and multiscale wavelet transform is proposed. The proposed method overcomes the limitation of wavelet based edge detection and mathematical morphology based edge detection in noisy images. Method present will give best results for noisy images.

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