

EFFICIENT GRIDDING AND SEGMENTATION FOR MICROARRAY IMAGES

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ABSTRACT

This work presents a new efficient gridding and segmentation approach for microarray image. Initially, the microarray images are pre-processed using Stationary Wavelet Transform (SWT), followed by a hard thresholding filtering technique to get a de-noised microarray image. Then, we use autocorrelation to enhance the self-similarity of the image profile to get an efficient gridding. The thresholding method is used for segmentation. The combined global and local thresholding improves the segmentation accuracy which is seen by the improvement in log intensity ratio. The proposed approach was evaluated using images from the Stanford Microarray Database, proved more accurate in intensity computation and more reliable means for estimating gene expression than conventional methods.

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