

Image Enhancement Algorithm of Photoacoustic Tomography Using Active Contour Filtering

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Abstract : The photoacoustic images are obtained from a custom developed linear array photoacoustic tomography system. The biological specimens are imitated by conducting phantom tests in order to retrieve a fully functional photoacoustic image. The acquired image undergoes the active region based contour filtering to remove the noise and accurately segment the object area for further processing. The universal back projection method is used as the image reconstruction algorithm. The active contour filtering is analyzed by evaluating the signal to noise ratio and comparing it with the other filtering methods.

Keywords : contour filtering, linear array, photoacoustic tomography, universal back projection

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