

## **Contour extraction of Echocardiographics images based on pre-processing.**

### **Abstract**

In this work we present a technique to extract the heart contours from noisy echocardiograph images. Our technique is based on improving the image before applying contours detection to reduce heavy noise and get better image quality. To perform that, we combine many pre-processing techniques (filtering, morphological operations, and contrast adjustment) to avoid unclear edges and enhance low contrast of echocardiograph images, after implementing these techniques we can get legible detection for heart boundaries and valves movement by traditional edge detection methods.

**Keyword:** Echocardiographic images.