

عنوان مقاله:

A New Method for Automatic Border Detection in IVUS Images and 3D Visualization of the Segmented Frames

محل انتشار:

اولین کنگره مشترک سیستم های فازی و سیستم های هوشمند (سال: 1386)

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خلاصه مقاله:

In this paper, an effective method for automated extraction of the lumen and media–adventitia borders in intravascular ultrasound (IVUS) images is presented. The method is based on non-parametric deformable models. The calcified deposits within an IVUS image appear as bright regions between the two extracted borders and obstruct the penetration of ultrasound, a phenomenon known as “acoustic shadowing”. We have visualized the segmented frames and highlighted the calcified regions in the 3D representation of IVUS images. The proposed method is evaluated using 70 IVUS frames from 7 different patients. Statistical analyses of the results demonstrate a high accuracy rate of the automatically extracted boundaries compared to those manually identified by expert

کلمات کلیدی:

Deformable models, IVUS, Border detection, 3D Visualization

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