Thesis Title	Application of Discrete Wavelet Transform and Maximum Curvature of Contours for Image Registration
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ABSTRACT

We introduce a multi-resolution image registration based on using discrete wavelet transform. We first extract contour from both images. The extracted contours are then fitted with B-spline curve representation to synthesize the new contours with the area parameter is used in B-spline fitting to make the new generated curve affine invariant. Discrete Wavelet Transform is applied for image registration However, DWT suffers from the problem of starting point. To solve the problem, maximum curvature is selected as starting point. Once the starting points on the contour have been established, the discrete wavelet transform is then recursively represented the contours until only few points are remained. Due to the affine-invariant properties of discrete wavelet transform, these points can be used as landmark points for registering the transformed contour with the original contour. The experiments have shown that the purposed methods are robust and promising even in the presence of noise.