



## Shape Prior based Image Segmentation using a Log Distance – Theta model

Janaka Senarathna and Ranga Rodrigo

### Abstract

*Image segmentation is a popular topic in computer vision. Incorporation of prior shape knowledge into this process and the subsequent extraction of objects demonstrating shape characteristics similar to the priors are being extensively researched. Major challenges include the judgment of parameters such as scale and rotation as well as tolerating object distortions such as occlusions and noise. This paper proposes a novel framework to successfully overcome these by using a log distance-theta domain mapping which greatly simplifies rotation, scaling and provides an opportunity to incorporate a decision threshold.*