

# Coastline Extraction from SAR Images Using Discriminant Cuts Segmentation

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In this paper, a new automatic approach was proposed to extract the coastline from SAR images by using discriminant cuts segmentation. Discriminant cuts is a graph-based spectral cluster algorithm. It completely satisfies the general criterion of the cluster algorithms: maximizing the within-cluster similarities while minimizing between-cluster associations. Compared with normalized cuts, discriminant cuts has better grouping performance in image segmentation. In the proposed approach, discriminant cuts is applied to discriminate water from land in SAR images. The approach was verified by using actual SAR data collected over the coastal area of Shanghai, China.

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