Marked point process model for boat extraction in harbors from high resolution optical remotely sensed imagery

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Abstract

Marked point process models have been successfully used in image analysis for feature extraction purposes in high resolution remotely sensed images. The model is usually based on two types of energy terms: a data term, which reflects the configuration's fidelity with respect to the input image, and a prior term, which reflects some knowledge about the objects to be extracted. We deal with the problem of elliptical shape extraction. We propose new energy terms for the extraction of boats in harbors, which is a particularly difficult problem and we show results on high resolution optical images.