Feature extraction from result of tsunami simulation by applying image analysis

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In this report, some interpretation methods of tsunami height distribution obtained by tsunami propagation simulation are tested. A wave crest, which is a typical feature of tsunami height distribution, is equivalent to a ridge in landform, so the methods used in landform analysis or image analysis are expected to be utilized to extract wave crest. In the case that Laplacian operator is applied, extracted region is broad in rise while disconnect in col, which is depend on selection of threshold. Application of median filter extracts wave crest successfully, including secondary wave crest formed by refraction effect. However, grids on which tsunami heights aren't local maxima are also extracted, so it needs to examine other type of filters.