Asymmetric Generalized Gaussian Mixture Models and EM algorithm for Image Segmentation

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Abstract : In this paper, a parametric and unsupervised histogram-based image segmentation method is presented. The histogram is assumed to be a mixture of asymmetric generalized Gaussian distributions. The mixture parameters are estimated by using the Expectation Maximization algorithm. Histogram fitting and region uniformity measures on synthetic and real images reveal the effectiveness of the proposed model compared to the generalized Gaussian mixture model.

Keywords : AGGMM, EM algorithm, histogram fitting, image segmentation