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Fast Adapting Mixture Parameters Schemes for Probability Density Difference-Based Deformable Model

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Abstract: This paper presents a new region-driven active contour using the pdf difference to evolve. The pdf estimation is done via a new and fast Gaussian mixture model (GMM) parameters updating scheme. The experiments performed on synthetic and X-ray images have shown not only an accurate contour delineation but also outstanding performance in terms of execution speed compared to the GMM estimation based on EM algorithm and to non-parametric pdf estimations.

Keywords : Active contour, Adaptive mixture, GMM parameters update