

Feature detection and matching is a fundamental problem in many applications in computer vision. We propose a novel approach that improves repeatability and precision of Local Affine Frames (LAFs) constructed on discretized contours detected by Maximally Stable Extremal Regions (MSERs) detector. Proposed method reconstructs a discretized contour of extremal region by taking into account the intensity function in local neighborhood of the contour points. Additionally we propose a new method for detection of local curvature extrema, based on the refined contour. The extensive experimental evaluation on publicly available datasets showed higher number of correspondences and higher inlier ratio in more than 80% of the image pairs. Since the processing time of the contour refinement is negligible, there is no reason not to include the proposed algorithms as a standard extension of MSER detector.