Abstract

This paper proposes a novel computationally efficient canny mean restoration algorithm for correspondence to identify the matching of the similar features between the reference image frames to the set of search image frames in the dynamic image sequence analysis for tracking motion object in the sequence. This restoration and correspondence has three major steps such as segmentation, feature extraction for restoration, and matching. This paper proposes block-based segmentation in which the reference image frame which contains the object to be tracked can be blocked as square window of size m*m which covers the object. The next step is the feature extraction for restoration. Here we have considered the block based features in which we calculate the canny edge mean of the region of interest. These features are invariant motion blur and noise of motion deblurring, denoiseing and it reduces the dimensionality and finally for matching we made use of the minimum absolute similarity distance measure for these features of the blocks. The searching space is restricted to [-15,+15] pixels in horizontal ,vertical and diagonal directions in the search image frames. The performance of the algorithm is presented for without preprocessed for slow moving objects of various sequences.
A Novel Canny Mean Restoration Algorithm for Correspondence and Motion Tracking in Dynamic Image Sequence Analysis

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Index Terms

Computer Science  Algorithms

Keywords

Canny Mean, Restoration, Correspondence, Motion tracking.