

Object Tracking in Motion Blurred Images with Adaptive Mean Shift and Wavelet Feature

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Abstract : A method for object tracking in motion blurred images is proposed in this article. This paper shows that object tracking could be improved with this approach. We use mean shift algorithm to track different objects as a main tracker. But, the problem is that mean shift could not track the selected object accurately in blurred scenes. So, for better tracking result, and increasing the accuracy of tracking, wavelet transform is used. We use a feature named as blur extent, which could help us to get better results in tracking. For calculating of this feature, we should use Harr wavelet. We can look at this matter from two different angles which lead to determine whether an image is blurred or not and to what extent an image is blur. In fact, this feature left an impact on the covariance matrix of mean shift algorithm and cause to better performance of tracking. This method has been concentrated mostly on motion blur parameter. transform. The results reveal the ability of our method in order to reach more accurately tracking.

Keywords : mean shift, object tracking, blur extent, wavelet transform, motion blur

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