

## Accepted Manuscript

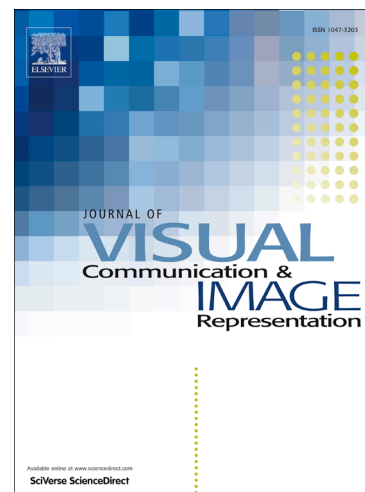
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PII: S1047-3203(17)30185-2  
DOI: <https://doi.org/10.1016/j.jvcir.2017.09.011>  
Reference: YJVICI 2060

To appear in: *J. Vis. Commun. Image R.*

Received Date: 25 October 2016  
Revised Date: 24 July 2017  
Accepted Date: 22 September 2017



Please cite this article as: G. Yue, C. Hou, K. Gu, N. Ling, No Reference Image Blurriness Assessment With Local Binary Patterns, *J. Vis. Commun. Image R.* (2017), doi: <https://doi.org/10.1016/j.jvcir.2017.09.011>

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# No Reference Image Blurriness Assessment With Local Binary Patterns

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## Abstract

In this paper, we put forward an effective and efficient no reference image blurriness assessment metric on the basis of local binary pattern (LBP) features. In this proposal, we reveal that part of the LBP histogram bins present monotonously with the degree of blurriness. The proposed method contains the following steps. Firstly, the LBP maps of an input image are extracted with multiple radiuses. And then, the frequency of pattern histogram is analyzed before part of bins are chosen as the features. In addition, we also take the entropy of these bins as another feature. Finally, we learn the extracted features to predict the image blurriness score. Validation of the proposed method is conducted on the blurred images of LIVE-II, CSIQ, TID2008, TID2013, LIVE3D IQA Phase I and LIVE3D IQA Phase II. Experimental results demonstrate that compared with the state-of-the-art image quality assessment (IQA) methods, the proposed algorithm has notable advantage in correlation with subjective perception and computational complexity.

*Keywords:* blurriness/sharpness, image quality assessment (IQA), no reference (NR), local binary pattern (LBP)

*Preprint submitted to Journal of Visual Communication and Image Representation September 28, 2017*

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