## Accepted Manuscript

Learning Visual Saliency from Human Fixations for Stereoscopic Images

Yuming Fang, Jianjun Lei, Jia Li, Long Xu, Weisi Lin, Patrick Le Callet

 PII:
 S0925-2312(17)30900-1

 DOI:
 10.1016/j.neucom.2017.05.050

 Reference:
 NEUCOM 18468



To appear in: Neurocomputing

Received date:14 February 2016Revised date:28 April 2017Accepted date:21 May 2017

Please cite this article as: Yuming Fang, Jianjun Lei, Jia Li, Long Xu, Weisi Lin, Patrick Le Callet, Learning Visual Saliency from Human Fixations for Stereoscopic Images, *Neurocomputing* (2017), doi: 10.1016/j.neucom.2017.05.050

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

## Learning Visual Saliency from Human Fixations for Stereoscopic Images

Yuming Fang<sup>a</sup>, Jianjun Lei<sup>b</sup>, Jia Li<sup>c</sup>, Long Xu<sup>d</sup>, Weisi Lin<sup>e</sup>, Patrick Le Callet<sup>f</sup>

 <sup>a</sup> Jiangxi Provincial Key Laboratory of Digital Media, School of Information Technology, Jiangxi University of Finance and Economics, Nanchang 330032, Jiangxi, China
 <sup>b</sup> School of Electronic Information Engineering, Tianjin University, Tianjin 300072, China

<sup>c</sup> State Key Laboratory of Virtual Reality Technology and Systems, School of Computer Science and Engineering, Beihang University, Beijing 100191, China <sup>d</sup> Key Laboratory of Solar Activity, National Astronomical Observatories, Chinese Academy of Sciences, Beijing 100012, China

<sup>e</sup>School of Computer Engineering, Nanyang Technological University, Singapore, 639798 <sup>f</sup>LUNAM Université, Université de Nantes, IRCCyN UMR CNRS 6597, Polytech Nantes, France

## Abstract

In the previous years, a lot of saliency detection algorithms have been designed for saliency computation of visual content. Recently, stereoscopic display techniques have developed rapidly, which results in much requirement of stereoscopic saliency detection for emerging stereoscopic applications. Different from 2D saliency prediction, stereoscopic saliency detection methods have to consider depth factor. We design a novel stereoscopic saliency detection algorithm by machine learning technique. First, the features of luminance, color and texture are extracted to calculate the feature contract for predicting feature maps of stereoscopic images. Furthermore, the depth features

wslin@ntu.edu.sg (Weisi Lin), patrick.lecallet@univ-nantes.fr (Patrick Le Callet)

Preprint submitted to Elsevier

*Email addresses:* fa0001ng@e.ntu.edu.sg (Yuming Fang), jjlei@tju.edu.cn (Jianjun Lei), jiali@buaa.edu.cn (Jia Li), lxu@nao.cas.cn (Long Xu),

Download English Version:

## https://daneshyari.com/en/article/4946943

Download Persian Version:

https://daneshyari.com/article/4946943

Daneshyari.com