

## Accepted Manuscript

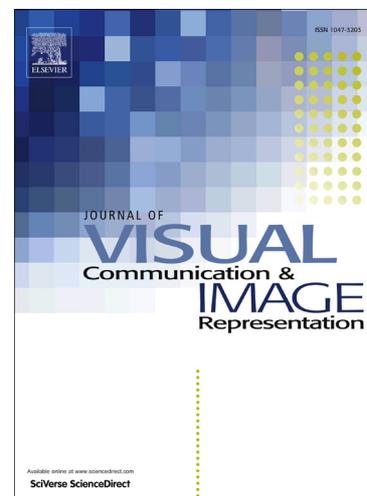
Nonnegative Coding Based Ensemble Tracking

Xiaolin Tian, Sujie Zhao, Licheng Jiao, Zhipeng Gan

PII: S1047-3203(16)30203-6  
DOI: <http://dx.doi.org/10.1016/j.jvcir.2016.09.014>  
Reference: YJVICI 1865

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

Received Date: 16 January 2016  
Accepted Date: 28 September 2016



Please cite this article as: X. Tian, S. Zhao, L. Jiao, Z. Gan, Nonnegative Coding Based Ensemble Tracking, *J. Vis. Commun. Image R.* (2016), doi: <http://dx.doi.org/10.1016/j.jvcir.2016.09.014>

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.

# Nonnegative Coding Based Ensemble Tracking

Xiaolin Tian\*, Sujie Zhao, Licheng Jiao, Zhipeng Gan

*Key Laboratory of Intelligent Perception and Image Understanding of Ministry of Education, International Research Center for Intelligent Perception and Computation, Xidian University, Xi 'an, People 's Republic of China*

*\* Corresponding author at: Institute of Intelligent Information Processing, Xidian University, P.O. Box 224, Xi 'an 710071, People 's Republic of China. Fax: +86 29 88201023. E-mail address: xltian@mail.xidian.edu.cn (X. Tian).*

## Abstract

We describes a novel ensemble learning framework for tracking single visual object that, unlike existing ensemble approaches, relies on the modified nonnegative coding to select the optimal subset of classifiers and determinate the corresponding weights. The obtained ensemble classifier makes the tracker to be more robust. The iteration update and the proof of convergence for solving the objective function of the nonnegative coding based ensemble learning are provided. For object tracking, we use the predicted labels generated by each selected individual classifier to compute the correct classification rate, and thence use it to identify occlusion, which is critical to minimize tracking drift. Evaluation is performed on fifty challenging benchmark sequences, and shows our approach achieving or exceeding the state of the art.

Download English Version:

<https://daneshyari.com/en/article/4969424>

Download Persian Version:

<https://daneshyari.com/article/4969424>

[Daneshyari.com](https://daneshyari.com)