



**SDI Review Form 1.6**

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| Journal Name:            | <b><u>British Journal of Applied Science &amp; Technology</u></b>                        |
| Manuscript Number:       | <b>2015_BJAST_18234</b>                                                                  |
| Title of the Manuscript: | <b>Image Normalization Using the Decomposition of Centroaffine Transformation Matrix</b> |
| Type of the Article      | <b>Original Research Article</b>                                                         |

**General guideline for Peer Review process:**

This journal's peer review policy states that **NO** manuscript should be rejected only on the basis of '**lack of Novelty**', provided the manuscript is scientifically robust and technically sound.

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**PART 1: Review Comments**

|                                               | Reviewer's comment                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Author's comment (if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)                                                                                                                                                                                                                                                                                                   |
|-----------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b><u>Compulsory</u></b><br>REVISION comments | <p>(1) The format of formulae in the pdf needs to be changed. They look blurred.</p> <p>(2) Is the L in Eq. (3), Line 60 the same with the L in Eq. (5) in Line 74, and the L in Line 69? Please explain.</p> <p>(3) D matrix in line 80 should be the rescaling matrix. Please add the definition.</p> <p>(4) Line 101. What's the definition of 'group' used here?</p> <p>(5) The subscript in line 104 is inconsistent.</p> <p>(6) Check the first two tg expressions of Eq. (9) and Eq. (10). The denominators are inconsistent.</p> <p>(7) How do you obtain Eq. (18)?</p> <p>(8) Why are the matrix expressions in Eq. (20) also decomposition centroaffine matrix? Please explain.</p> <p>(9) <math>m^*</math> in Fig. 2 is perpendicular to the transformed image plane?</p> <p>(10) In section 3. I think the most difficult part is how to find parameters in line 245-249. This is especially difficult for natural images other than the synthetic patches. And that involves feature extraction and matching.</p> <p>The paper needs a major rewrite. There are gaps between the logic between each step.</p> | <ol style="list-style-type: none"> <li>1. Updated</li> <li>2. Yes they are the same and L is defined after each of them</li> <li>3. Updated</li> <li>4. Updated, replaced by "set"</li> <li>5. Updated</li> <li>6. Eq. 9 updated</li> <li>7. By substituting the variables from 12, 13, and 14 sequentially.</li> <li>8. Updated, eq. 20 removed.</li> <li>9. Yes it is. "Perpendicular to the transformed image plane" had been added to text.</li> <li>10. updated</li> </ol> |
| <b><u>Minor</u></b> REVISION comments         | Necessary definitions of the related math terms, such as the centroaffine should be briefly reviewed in a background section. Limitations of existing methods should also include.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Updated                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b><u>Optional/General</u></b> comments       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |