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Journal Name:	British Journal of Applied Science & Technology
Manuscript Number:	2013_BJAST_6295
Title of the Manuscript:	Component-Based Thermal Face Recognition
Type of the Article	Research Paper

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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 <i>(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)</i>
<u>Compulsory</u> REVISION comments	1. Section 2 presents a list of paper summaries. Each reference should be summarized critically, highlighting its limitations and how the proposed method aims to overcome such limitations. 2. Authors should give more images after each and every steps of the proposed algorithm. 3. In section 5, authors have mentioned that they have performed some pre processing steps before the main experiments like size, orientation, position etc. I think, these are all very important task for pose change images. So, if authors mention about these steps clearly then the quality of the paper will be improved. 4. The images used with the histogram are the original images or the images which are calculated after the double precision value. If authors' answer is original images, then what is the significance of calculating the double precision value of an image? If authors' answer is the second one then I think most of occurrences of the double precision value will be zeros. In that case the histogram distribution of an image will not be matched with your results.	1. We would like to thank the reviewer for his valuable comments. These comments have enhanced the quality of the paper and it is now of better looking. The revised version of the paper has cited other references and Section 2, the Literature Review, has been changed accordingly. We tried to critically summarise them (as possible), stating their limitations and advantage of our method, and how the proposed method can overcome these limitations. Further, we have compared our results with some published works. The results of these papers have been compared with our method. Please check Section 2 and Section 5. 2. Please check Section 5, where we have added more experimental works. These experiments, results, and images are shown in Section 5 and in: Tables 1, 2, 3, and 4, Figures 10, 11, 12, 13, and 14. 3. We totally agree with the reviewer that mentioning detailed steps of pre-processing will give better insight. However, due to space limitations we could not add further details. As the reviewer may have noticed, the experimental results section is



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	5. Authors have mentioned about the size of the bins. Different bin values have been considered for their experiment but, what will be the histogram distribution of each bin that has not been mentioned clearly. If authors found the histogram distribution on the double precision valued of an image, then I think most of the entries will be zeros of a bin. 6. Authors have talked about data fusion. Is it data fusion or decision level fusion? Please check it out. 7. The face recognition method in this paper is not really new since the techniques they utilized, have been proposed several years ago, especially the histogram distribution and the bin concept. 8. Is AIAOU thermal face database is publicly available or not? 9. Please summarize the theoretical contribution of this paper. 10. Moreover, the authors should compare their algorithm with the recent works of other researchers to make their results more convincing. There are few benchmark databases available. Authors can test their methods on these databases like IRIS Thermal/Visible Face Database and Terravic Facial IR Database. I am giving you some of the recent references. Please see the following references: a) “Automated thermal face recognition	comprehensive and includes many important and detailed results and analysis. Hence, we are restricted with space. We hope that with the new added experiments and results in the revised version the overall quality has already been enhanced and improved. 4. The significance of conversion to double precision is realized for variance calculations. 5. We would like to clarify here that the histogram we show is for thermal images represented by the temperature Celsius degrees. In other words, it is the temperature values that we consider and not the grey-level value of an image. We have already calculated the histograms for many more bin sizes. But, due to space limitations we could not show all the relevant results. 6. It is decision level fusion. We have added a separate paragraph at the end of Section 3 (just before Figure 1) explaining the kind of fusion method we are using and its nature. 7. We agree that the idea of histogram distribution by itself is not new, but to the best of our knowledge the way we consider the implementation of histogram distribution of thermal images and moments calculations at the component level is new. Especially when we use
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	based on minutiae extraction” b) “Thermal Human Face Recognition Based on Haar Wavelet Transform and Series Matching Technique” c) “A Comparative Study of Human Thermal Face Recognition Based on Haar Wavelet Transform and Local Binary Pattern”	decision level fusion to combine the results to yield a final fused decision that is based on a joint assertion of multiple single source results. This will improve system classification. 8. As for the AIAOU database, it is a new database that we have established recently locally at the University. It is still under construction and has not been published for publicity yet. Actually, we are still working on it trying to make it at a standard level. 9. We have added a paragraph at the end of Section 1 summarizing the contribution of the paper. 10. The aim of the paper was to proof a concept. Eventually, we will consider the implementation of our technique on more benchmark and larger databases (like the ones the reviewer have pointed out) in our future work. Further, the new version of the paper has cited other established techniques and we have compared our results with them accordingly. Section 2, the Literature Review, has been changed accordingly and many more references have been added. Moreover, we have added more experimental works to demonstrate the efficiency of the technique. These experiments and results are shown in Section 5 and in: Tables 1, 2, 3, and 4, Figures 10, 11, 12, 13, and
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		14. These are all new results that were not available in the original version. Also, in Section 5 – Table 3 we provide a comparison with other algorithms found in more recent works.
<u>Minor</u> REVISION comments		
<u>Optional/General</u> comments		