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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 (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)
Compulsory REVISION comments	The paper is poorly written and contains many errors, Many details are missing and the notation is poorly developed, clearly, this submission fails to address the following criteria: quality, clarity, originality and significance. The paper never clearly explains the fusion scheme they applied, neither in abstraction section nor in the section 3. the figure 1 and equations are in the form of low resolution which poses severe challenges to the readability of the manuscript. The paper should cite and compare with other established techniques for thermal face recognition (e.g, why are there no quantitative comparisons to some commonly used methods such as [1] Shangfei Wang, Zhilei Liu, Siliang Lv, Yanpeng Lv, Guobing Wu, Peng Peng, Fei Chen, Xufa Wang, A Natural Visible and Infrared Facial Expression Database for Expression Recognition and Emotion Inference, <i>IEEE Transactions on Multimedia</i>, VOL. 12, No. 7, Page(s): 682-691, NOVEMBER 2010.	We would like to thank the reviewer for his comments. These comments have enhanced the quality and the new version of the paper is of much better looking. The paper has gone through an extensive review and proofreading and has considered the different remarks raised by the reviewer. As the reviewer may have noticed that the study of best fusion method is beyond the scope of this paper, and in the revised version we have stated this clearly. Actually this important factor need a separate study by itself, and it will be part of our future work. Nevertheless, we have added a separate paragraph at the end of Section 3 (just before Figure 1) explaining the kind of fusion method we used and its nature. As for equation low form resolution, unfortunately this is because of the journal template form, which is built with Word 2003. Our original equations have all been built with a newer version of word processing and are all of high resolution.



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	[2] Bhowmik M.K., Bhattacharjee D., Basu D. K. & Nasipuri M. (April 25 – 29, 2011b). Independent Component Analysis (ICA) of fused Wavelet Coefficients of thermal and visual images for human face recognition. Proceedings of SPIE Defense, Security, and Sensing 2011, IR Sensors and Systems, Conference DS100, SPIE and SPIE Digital Library, Orlando World Center Marriott Resort & Convention Center, Orlando, Florida, USA, April 25 – 29, 2011) For the reference part, it is clear that the authors didn't take a careful look for the submission format, since many reference items are either incomplete or incorrectly cited, such as [12], [14], [15]. Also, it is not clear for the introduction of AIAOU database which was used in the paper, I couldn't even find any trait of it either on the link the author provided in the reference list item 7 or by Google Furthermore, according to the authors, the size of the database (570 images for 19 subjects) is apparently inadequate for any meaningful conclusion. For a fair comparison, there are two databases are publicly available benchmark dataset for testing and evaluating novel and state-of-the-art thermal face recognition algorithms: IRIS (Imaging, Robotics and Intelligent System) thermal/visual database, which contains 1529 images, and Terravic facial infrared database, which contains 21,308 images.	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. The results of these papers have been compared with our method. Please check Section 5 – Table 3. Further, 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 14. The revised form, after proofreading, has considered the reference part carefully and the necessary modifications have been implemented. As for the AIAOU database, it is a new database that we have established 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. Also, we agree with the reviewer that the size of the database is relatively not large enough. However, as the reviewer may have noticed that many recent works done
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	For the experimental section, the authors tried to describe the whole system and experiment setup. but failed to give a clear introduction, such as description of training set and testing set, cross evaluation results, which are of great importance for any scholars who might be interested in the experimental results and therefore would like to follow the whole procedure. Also, the histogram distribution figures are redundant for the experiment section. Table.1 and figure 2 are totally unnecessary, since they won't be of any substantial help for the system description section. A simple literal description will be enough. Overall, The paper is poorly written, and is difficult to understand. The contributions of the paper are unclear. The experimental results are lacking, and do not show comparisons with any other method. And this work is incremental and unlikely to have much impact even though it may be technically correct and well executed. I would say this paper should be rejected unless they provide substantial experimental results showing their method's effectiveness compared with other SOA methods or other benchmark databases.	by different researchers have presented their work with similar database size. Mainly because this field of study is relatively new when compared to face recognition in visible spectrum. Further, the aim of the paper was to proof a concept. And eventually, we will consider our technique on more benchmark and larger databases (like the ones the reviewer have pointed out) in our future work. With respect to the experimental section, we have modified its introduction and added a further description about the training set and the testing set. Please check the new revised version of the paper. Table 1 that the reviewer has pointed has been removed. Actually, we have added four new tables in the revised version that were not available in the original version. These tables consider more experiments. We hope that the new revised version of the paper has correctly and comprehensively addressed all the remarks and comments raised by the reviewer. As we have stated earlier we have added further experimental works and compared our work to other methods. Further we have added a paragraph at the
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		end of Section 1 summarizing the contribution of the paper.
<u>Minor</u> REVISION comments		
<u>Optional/General</u> comments		