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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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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	As we know, previous face recognition systems have achieved very high accuracy and a number of face recognition products have been applied. However, the face recognition system proposed in this paper obtains only a recognition rate of 94.2%, which shows that the proposed system does not perform better than previous systems. What's the reason? The authors should present the reason. Also, they should show how to improve the proposed system (including the idea and way to the system) in the future for obtaining satisfactory performance.	We would like to thank the respected reviewer for his constructive comments. As the reviewer may recall, this field of study is relatively new and has not been tackled so aggressively by researcher, especially when compared to face recognition in visible region. No standard protocol has yet been proposed for testing. We have actually modified the literature review section to include more work and cited more result recorded by researchers. In the new revised version of the paper, we have added a new table, Table 3, showing experimental results with thermal images from other researchers. However, these different works have used different databases. In other words, it is hard to make a general comparison among the different methods without having a unified scale and a general agreement on benchmark databases. We expect to reach this stage in the coming few years as the field will be more matured. In this paper and at this stage, we aimed at proving our concept. The initial experimental results are encouraging and motivate to further explore new directions in the field of thermal image recognition.



SDI Review Form 1.6

		Another important issue, we aim at increasing the success rate in an <i>efficient</i> way. We are considering another important issue beside the success rate: it is the time consumed. It is important to have a system that performs superiorly, but it is also important that this performance does not tolerate the system speed. Moreover, we have made more experiments in the last few weeks and have more carefully addressed the pre-processing stage. This has enhanced the overall result to 96%. Also, we have added Table 4 that considers the consumed time issue. The results shown are very promising and we hope that our future work addresses these issues in more details.
Minor REVISION comments	Because different algorithms obtain different accuracies, I also suggestion that the authors use other recognition algorithms such as the ones proposed in previous face recognition systems to perform classification. This will help readers to better understand the proposed system. Moreover, as a work on the focus of face recognition, the paper does not well review previous face recognition literature. I suggest the authors modify the corresponding section and mention previous face recognition techniques and methods. For example, the literature to comprehensively present face recognition techniques such as “Advanced Pattern Recognition Technologies with Applications to Biometrics, Medical Information Science Reference, 2009” should be mentioned. Moreover, the most popular face recognition algorithms such as the sparse representation algorithms shown in the following papers should be comments:	We would like to thank the reviewer again. These comments have enhanced paper’s quality and the new version is of much better looking. 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 references that the reviewer has pointed have also been considered in the revised version. Further, the results of different papers have been compared with our method. Please check Section 5 – Table 3. Further, we have added more new experimental works to demonstrate the efficiency of the technique. These experiments and results are shown in Section 5 and in: Tables



SDI Review Form 1.6

	(1) Beyond sparsity: The role of L1-optimizer in pattern classification, Pattern Recognition, 45, 1104 – 1118, 2012 (2) A two-phase test sample sparse representation method for use with face recognition, IEEE Transactions on Circuits and Systems for Video Technology, 21(9), 1255-1262, 2011 (3) Using the idea of the sparse representation to perform coarse to fine face recognition, Information Sciences, 238, PP:138-148, 2013 Actually, the sparse representation algorithm has been viewed as a breakthrough in face recognition.	1, 2, 3, and 4, Figures 10, 11, 12, 13, and 14. Our future work will consider the feasibility of utilising new representation algorithms (like the sparse representation) and how can we combine them with our method, in order to enhance the overall performance.
<u>Optional/General</u> comments	If possible, the authors can also use the well known sparse representation algorithm to perform face recognition 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. Our future work will consider the feasibility of utilising new representation algorithms, like the sparse representation for thermal images.