



SDI Review Form 1.6

PART 1:

Journal Name:	<u>British Journal of Applied Science & Technology</u>
Manuscript Number:	2013_BJAST_5544
Title of the Manuscript:	Research on pearl detecting and grading based on monocular multi-view machine vision
Type of the Article	Research Paper

General guideline for Peer Review process is available in this link:

(<http://www.sciencedomain.org/page.php?id=sdi-general-editorial-policy#Peer-Review-Guideline>)

- This form has total 7 parts. Kindly note that you should use all the parts of this review form.



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PART 2: 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. The section of introduction needs to be rewritten. More exhaustive summary of existing methods, and the disadvantages of these methods, as well as the advantage of this proposed method, are expected to be elaborated. Do not just list different methods. 2. More details are needed on how to calculate the parameters color, glossy, smoothness, pearl layer's thickness. 3. How equation (3) derived is not clear. 4. Although Table 1 and 2 show some results, I think the number of samples is limited. 5. The experiments only provided results from the proposed method in this paper. Without knowing exactly how other researchers handle the same problem, the usefulness and effectiveness of this proposed method is hard to justify.	1. According to your comment, we rewrote the section of introduction. Added more summary of existing methods and their disadvantages. Also we gave a detailed introduction of this paper's advantages. The corrections are highlighted in yellow colour. 2. According to your comment, we added the content of colour, glossy and smoothness detection. But in this paper, we plan to lay the emphasis on the design of hardware system. And the design of software will be introduced in the following paper because it would cost 15-20 more pages to introduce these algorithms. 3. The equation (3) is derived from the fuzzy pattern recognition and document [6] introduced it in detail. 4. Your idea is correct. We also want to use more samples to verify the result. But the company only provided us so many samples. We will solve this problem soon. 5. According to your comment, we made a contrast between our research and the existing methods in Section 7.2.
<u>Minor</u> REVISION comments	1. The language of this paper needs to be improved. An English editor or native English speaker should be involved in the preparation of the manuscripts to cover a number of grammar problems.	1. We checked the whole paper and modified the format and grammar mistakes. 2. Figure 2 shows five perspectives of a globe, and view point 1, 2, 3 and 4 are the front



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	2. The reviewer can not find some differences among View point1, 2, 3, and 4 in Fig. 2. 3. Page 4, Line 5: please explain why select 9 degree? 4. The authors should present the calculation time of the proposed method to evaluate whether it is suitable for real time detection.	view, left view, rear view and right view. For a globe, they are the same. This figure is used to show that the device could obtain the whole sphere of the pearl. 3. The reason to select 9 degree is that it is the best degree for us to make the detection. We conducted a number of experiments in each degree and finally chose the 9 degree. 4. The processing time is provided in Section 7.2, Paragraph 2.
<u>Optional/General</u> comments	This paper presents a pearl's detecting and grading system. This may be helpful for calculating the parameters of pearls, such as size, shape, luster, blemishes and colour. I consider that the final target is interesting.	Thanks for your good comment and appreciation to our research.