

**Review Form 3**

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|--------------------------|--|
| Journal Name:            | <a href="#">Current Journal of Applied Science and Technology</a>  |
| Manuscript Number:       | Ms_CJAST_124365  |
| Title of the Manuscript: | <b>Predictive Maintenance and Damage Mitigation in Bridge Structures Using Integrated Acoustic Emission and Digital Image Correlation Techniques</b> |
| Type of the Article      |  |

**Review Form 3**

**PART 1: Review Comments**

| <b>Compulsory</b> REVISION comments   | Reviewer's comment   | Author's Feedback <i>(Please correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)</i> |
|---|--|---|
| <p><b>Please write a few sentences regarding the importance of this manuscript for the scientific community. Why do you like (or dislike) this manuscript? A minimum of 3-4 sentences may be required for this part.</b></p>                        | <p>This manuscript is highly valuable to the scientific community as it addresses the critical issue of bridge maintenance and safety, which has far-reaching societal and economic impacts. By exploring integrated acoustic emission and digital image correlation techniques, it provides innovative solutions to ensure early damage detection and prolong the lifespan of bridge structures. I appreciate the manuscript's clear focus on predictive maintenance, a subject of growing importance in civil engineering.</p> |   |
| <p><b>Is the title of the article suitable? (If not please suggest an alternative title)</b></p>  | <p>The current title, "Predictive Maintenance and Damage Mitigation in Bridge Structures Using Integrated Acoustic Emission and Digital Image Correlation Techniques," is suitable as it reflects the core focus of the manuscript.</p>  |   |
| <p><b>Is the abstract of the article comprehensive? Do you suggest the addition (or deletion) of some points in this section? Please write your suggestions here.</b></p>   | <p>The abstract is comprehensive, but a clearer statement about the specific findings or insights gained from reviewing predictive maintenance methods could enhance its impact. I suggest adding a sentence summarizing the manuscript's contribution to the field.</p>   |   |
| <p><b>Are subsections and structure of the manuscript appropriate?</b></p>  | <p>The subsections and structure are appropriate, guiding the reader logically from the problem statement to the technical details of both methods. However, some minor revisions for clarity and smoother transitions between sections may improve readability.</p>   |   |
| <p><b>Please write a few sentences regarding the scientific correctness of this manuscript. Why do you think that this manuscript is scientifically robust and technically sound? A minimum of 3-4 sentences may be required for this part.</b></p> | <p>This manuscript is scientifically robust and technically sound, as it thoroughly reviews established and emerging techniques for structural health monitoring. The inclusion of real-life case studies and a comparison of acoustic emission and digital image correlation with other methods underscores its scientific merit. The discussions are well-researched and grounded in current literature, which strengthens the manuscript's reliability.</p>   |   |
| <p><b>Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form.</b><br/>:</p>   | <p>The references are adequate and relatively recent. However, I recommend including more recent studies published within the last two years to ensure the manuscript reflects the latest advancements in bridge monitoring technologies including more case studies or field applications could enhance the review. Suggested references might focus on similar integrated techniques applied to different structures or settings.</p>  |   |

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| Minor REVISION comments<br><b>Is the language/English quality of the article suitable for scholarly communications?</b> | The language quality is mostly suitable for scholarly communication. However, there are minor grammatical errors and awkward phrasings that could benefit from revision for clarity and flow. For example, phrases such as "dependable techniques are needed" could be rephrased for more formal tone (e.g., "reliable methods are essential"). The paper could also benefit from more uniformity in tense usage, especially in the methodology section.   |  |
| <b>Optional/General</b> comments  | This manuscript provides a valuable contribution to the field of structural health monitoring by integrating acoustic emission and digital image correlation techniques for predictive maintenance and damage mitigation in bridge structures. The approach is innovative, offering a non-invasive and efficient solution to a critical problem faced by bridge authorities globally. The paper is well-structured, with clear explanations of the techniques and their applications. However, enhancing the practical relevance with real-world case studies or applications would further strengthen the manuscript. |  |

### **PART 2:**

|   | <b>Reviewer's comment</b>  | <b>Author's comment</b> (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>Are there ethical issues in this manuscript?</b> | <i>(If yes, Kindly please write down the ethical issues here in details)</i> |  |

### Reviewer Details:

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|----------------------------------|---|
| Name:                            | <b>Izwah Binti Ismail</b>               |
| Department, University & Country | <b>Politeknik Bagan Datuk, Malaysia</b> |