Review Form 3

Journal Name:	**Journal of Engineering Research and Reports**
Manuscript Number:	**Ms_JERR_127119**
Title of the Manuscript:	**Research Method for Rapid Layout of Bridge Models Based on BIM Technology**
Type of the Article	**Review Article**

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PART 1: Review Comments

Compulsory REVISION comments	**Reviewer's comment**	**Author's Feedback** *(Please correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)*
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.	**The manuscript on rapid layout of bridge models based on BIM technology holds significant value for the scientific community, especially for professionals and researchers in civil engineering and construction technology. By addressing the complexities of bridge modeling with the integration of Revit API and Excel, it contributes to advancing automation and accuracy in bridge engineering, an area less explored within BIM applications. The methodology offers a practical, efficient approach that could streamline workflows, reduce errors, and promote BIM adoption in bridge projects. I appreciate the manuscript's innovative use of programming to tackle real-world engineering challenges, though improvements in technical clarity could enhance its accessibility and impact for a broader audience.**	
Is the title of the article suitable? **(If not please suggest an alternative title)**	**the title, "Research Method for Rapid Layout of Bridge Models Based on BIM Technology," is fairly descriptive, but it could be improved to reflect the manuscript's focus on parametric modeling and the use of specific tools like Revit and Excel. A more precise title could be: "Parametric Modeling Method for Rapid Bridge Layout Using BIM Technology: A Revit and Excel Integration Approach"**	
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.	**The abstract of the article covers the main objectives and methods but could be enhanced for clarity and conciseness. Here are some specific suggestions:** **1. Conciseness: The abstract is somewhat lengthy and includes repetitive phrases. Consider tightening it by removing redundant words, which will improve readability and focus on key points.** **2. Clarity on Methodology: While the abstract mentions the use of "Revit+Excel" and the development of a plugin, it would be helpful to provide a brief explanation of how these tools interact to achieve rapid modeling.** **3. Highlight Contributions: Adding a sentence on the significance of this approach (such as its potential impact on efficiency and accuracy in bridge engineering) will strengthen the abstract by emphasizing its contribution to the field.** **4. Result Summary: A concise summary of the results or a statement on the success of the plugin in improving modeling accuracy would give the reader a clear idea of the outcome**	
Are subsections and structure of the manuscript appropriate?	**yes**	
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.	**The manuscript demonstrates scientific correctness and technical soundness by thoroughly addressing the challenges of BIM application in bridge engineering, a complex and specialized area. The use of Revit API combined with C# and Excel for parametric modeling is methodologically robust, allowing for a high degree of automation and precision in bridge model layout. By leveraging established technologies and programming techniques, the authors present a solution that is both practical and feasible, validated through clear technical descriptions and references to similar approaches in the literature. The detailed breakdown of the plugin development process, along with the logical workflow, supports the manuscript's reliability and potential reproducibility by other researchers or practitioners in the field.**	
Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form. **-**	**Avendaño, José Ignacio, Alberto Domingo, and Sisi Zlatanova. 2023. "Building Information Modeling in Steel Building Projects Following BIM-DFE Methodology: A Case Study" Buildings 13, no. 9: 2137. https://doi.org/10.3390/buildings13092137 ; Avendaño, José Ignacio, Sisi Zlatanova, Pedro Pérez, Alberto Domingo, and Christian Correa. 2022. "Integration of BIM in Steel Building Projects (BIM-DFE): A Delphi Survey" Buildings 12, no. 9: 1439. https://doi.org/10.3390/buildings12091439**	

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Minor REVISION comments **Is the language/English quality of the article suitable for scholarly communications?**	yes	
Optional/General comments	**General Assessment** The article has a solid technical foundation and covers the development of a Revit-based plugin for bridge modeling. The focus on parametric design using Revit API and Excel for bridge component modeling is well-justified given the complexities in bridge engineering. However, there are several areas needing improvement for clarity and cohesion before publication. **Detailed Feedback** 1. **Abstract & Introduction**: o The abstract effectively captures the research's goals but could benefit from a more concise summary. Consider removing repetitive phrases to enhance readability. o The introduction is informative but could be reorganized to differentiate clearly between general background on BIM technology and the specific challenges of applying it in bridge engineering. 2. **Literature Review**: o The referenced studies are relevant; however, the transitions between them could be smoother. Each study could be briefly linked to the current research to highlight the article's contribution. o Adding a short concluding sentence to the literature review would reinforce the existing research gap this paper addresses. 3. **Methodology**: o The methodology is well-detailed, but sections explaining the integration of Excel and Revit API would benefit from additional clarity, especially for readers unfamiliar with the Revit API. Visual aids, like screenshots, might help illustrate the process better. 4. **Figures**: o Some figure captions are unclear (e.g., "Fig. 3. Sections and parameters of tie beam and T-beam"). Ensure each caption adequately describes the content and relevance to the text. o The figures should ideally include references within the main body to guide readers on when and how each figure is relevant. 5. **Technical Language**: o In some sections, the technical jargon could hinder comprehension for readers unfamiliar with programming. Brief explanations of specific terms (e.g., "WPF applications," "IExternalCommand interface") would improve accessibility. 6. **Conclusion**: o The conclusion effectively summarizes the research's contributions but should also discuss potential limitations and future research avenues. 7. **Grammar & Style**: o Some grammatical issues and typos are present. For example, "there by" should be "thereby," and "NUGET" should be "NuGet." o Consistency in terminology (e.g., "T-beam" vs. "T-shaped beam") would improve professionalism.	

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PART 2:

	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)*
Are there ethical issues in this manuscript?	*(If yes, Kindly please write down the ethical issues here in details)*	

Reviewer Details:

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