Review Form 3

Journal Name:	**Journal of Advances in Mathematics and Computer Science**
Manuscript Number:	**Ms_JAMCS_126578**
Title of the Manuscript:	**ITERATIVE METHODS FOR THE SOLUTION OF HESTON EQUATION WITH** **MAMADU-NJOSEH POLYNOMIALS**
Type of the Article	

Review Form 3

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.	**This manuscript presents a valuable contribution to numerical methods, focusing on enhancing the Homotopy Perturbation Method (HPM) and Variational Iteration Method (VIM) using Mamadu-Njoseh Polynomials (MNPs). By improving the convergence rates for the Heston Stochastic Partial Differential Equation (HSPDE), the authors offer an innovative approach that may benefit computational finance, particularly in modeling stochastic volatility. I appreciate the paper's focus on modifying existing methods, which provides the scientific community with alternative numerical approaches that could be more efficient in specific applications.**	
Is the title of the article suitable? **(If not please suggest an alternative title)**	The current title, "Iterative Methods for the Solution of Heston Equation with Mamadu-Njoseh Polynomials," is suitable but could be refined to reflect the main contribution: "Enhanced Iterative Methods Using Mamadu-Njoseh Polynomials for Solving the Heston Stochastic Partial Differential Equation."	
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 effectively summarizes the purpose, methods, and findings. However, it would be beneficial to clarify the main advantage of the Modified VIM over the Modified HPM, emphasizing its potential impact. Adding a brief mention of specific applications or domains that could benefit from this approach would also strengthen the abstract.**	
Are subsections and structure of the manuscript appropriate?	The structure is generally appropriate, with sections dedicated to introducing each numerical method, the Heston equation, and the modifications applied. However, clearer subsection titles or more detailed outlines in sections discussing numerical methodologies could enhance readability.	
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.	**Scientific correctness of the manuscript The manuscript is scientifically robust, with thorough derivations and precise applications of iterative methods. The modifications introduced using MNPs demonstrate a thoughtful approach to improving existing algorithms, as evidenced by the comparison of convergence rates. The computational framework and detailed presentation of mathematical derivations strengthen the reliability of the findings. Additionally, the inclusion of tables showing numerical results supports the claims made regarding the efficiency of the Modified VIM.**	
Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form. **-**	**The references are sufficient and relevant. To further contextualize the significance of this study, it may help to include more recent research on HPM and VIM applications in financial modeling or other stochastic PDE applications. This could give readers a broader view of the manuscript's impact.**	

Review Form 3

Minor REVISION comments **Is the language/English quality of the article suitable for scholarly communications?**	The language is mostly clear, but some sentences could be simplified for better readability. Specific terms could be clarified to ensure accessibility to a broader audience, particularly for readers less familiar with advanced numerical methods.	
Optional/General comments	Overall, the manuscript presents a noteworthy contribution to iterative numerical methods, with potential implications for fields requiring efficient solutions to stochastic PDEs. The innovative approach of using Mamadu-Njoseh Polynomials as modifiers offers an interesting avenue for future research in optimizing other PDE models. Including more visual aids, such as error convergence plots, could further enhance the reader's understanding and engagement with the results. The manuscript demonstrates a rigorous approach and provides insights into modified iterative methods. However, minor improvements in readability, the inclusion of additional references, and possible visual aids are recommended to enhance clarity and impact. The manuscript presents an innovative approach to solving the Heston Stochastic Partial Differential Equation (HSPDE) using modified iterative methods. The incorporation of Mamadu-Njoseh Polynomials (MNPs) as modifiers is a unique contribution that could interest readers in computational finance and applied mathematics. Minor revisions focused on clarity, readability, and additional references could enhance the manuscript's accessibility and impact.	

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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