

Review Form 1.7

Journal Name:	Asian Research Journal of Mathematics
Manuscript Number:	Ms_ARJOM_106890
Title of the Manuscript:	Linear Hybrid Multistep Block Method for Direct Solution of Initial Value Problems of Third Order Ordinary Differential Equations
Type of the Article	

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PART 1: Review Comments

	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)
<p>Compulsory REVISION comments</p> <ol style="list-style-type: none"> Is the manuscript important for scientific community? (Please write few sentences on this manuscript) Is the title of the article suitable? (If not please suggest an alternative title) Is the abstract of the article comprehensive? Are subsections and structure of the manuscript appropriate? Do you think the manuscript is scientifically correct? Are the references sufficient and recent? If you have suggestion of additional references, please mention in the review form. <p><u>(Apart from above mentioned 6 points, reviewers are free to provide additional suggestions/comments)</u></p>	<p>Subject: Referee Report for Manuscript "Linear Hybrid Multistep Block Method for Direct Solution of Initial Value Problems of Third Order Ordinary Differential Equations"</p> <p>I have had the privilege of reviewing the manuscript titled "Linear Hybrid Multistep Block Method for Direct Solution of Initial Value Problems of Third Order Ordinary Differential Equations" submitted to ARJOM . After careful evaluation, I provide my assessment and recommendations below.</p> <p>Summary: The manuscript presents a new numerical method, referred to as the "Linear Hybrid Multistep Block Method," for solving initial value problems (IVPs) associated with third-order ordinary differential equations (ODEs). The authors outline the derivation of the method, provide theoretical analysis, and present numerical experiments to demonstrate its efficacy. Overall, the paper is generally well-written and explores an important area in numerical ODE solving.</p> <p>Strengths: Theoretical Justification: The manuscript offers a comprehensive theoretical foundation for the new method. The authors provide detailed derivations, stability analyses, and convergence proofs, which strengthen the credibility of their approach. Numerical Experiments: The numerical experiments presented in the paper demonstrate the effectiveness and efficiency of the proposed method. The comparison with existing methods showcases its competitive performance.</p> <p>Areas for Improvement: Clarity of Presentation: While the manuscript is generally well-written, there are some sections where the explanation of concepts could be improved for better comprehension. For instance, certain derivations and notations could be more clearly explained to aid readers in understanding the method. Figures and Tables: Some of the figures and tables could benefit from additional clarity and labeling. Ensuring that all relevant information is presented in a clear and concise manner would enhance the reader's understanding of the results. Discussion of Limitations: The authors should consider discussing any potential limitations or practical challenges associated with the proposed method. This would provide a more balanced perspective for readers evaluating its suitability for specific applications.</p> <p>References: The references provided in the manuscript could be updated to include the most recent literature relevant to the topic. This would ensure that readers have access to the latest developments in the field.</p> <p>Authors need to add following papers to their references and take into consideration them:</p> <ol style="list-style-type: none"> Carlos Frasser, Özen ÖZER, 20 August 2020, First Order Ordinary Differential Equations and Applications, Lambert Academic Publishing. https://www.amazon.com/First-order-Ordinary-Differential-Equations- Applications/dp/6202798416 ISBN-13:978-620-2-79841-9, ISBN-10:6202798416 SHUKLA Piyush K., ÖZER ÖZEN (2020). The Interplay Between Missing Data and Out-of-Order Measurements using Data Fusion in Wireless Sensor Networks. Fusion: Practice and Applications (FPA), 1(2), 66-78. 	

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	Suggestions for Improvement / Minor Revision	
	<p>Overall Assessment: The manuscript presents a valuable contribution to the field of numerical methods for solving ODEs, particularly third-order ODEs. With some minor revisions to enhance clarity and a more thorough discussion of potential limitations, this paper has the potential to make a significant impact in the research community. I recommend the acceptance of this manuscript for publication in [Journal Name] after the authors address the points raised in this report.</p> <p>I appreciate the opportunity to review this manuscript and contribute to the peer-review process. Please feel free to contact me if further clarification or additional information is required.</p> <p>Sincerely</p>	
Minor REVISION comments		
1. Is language/English quality of the article suitable for scholarly communications?	MENTIONED AS ABOVE	
Optional/General comments		
	MENTIONED AS ABOVE	

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?	<i>(If yes, Kindly please write down the ethical issues here in details)</i>	

Reviewer Details:

Name:	Özen Özer
Department, University & Country	Kırklareli University, Turkey