

ReviewForm3

JournalName:	JournalofAdvancesin MathematicsandComputerScience
ManuscriptNumber:	Ms_JAMCS_125603
TitleoftheManuscript:	ApproachDerivedfromLévyFlighttoIdentifyaDivisorofanOddCompositeInteger
TypeoftheArticle	OriginalResearchArticle

PART1: ReviewComments

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)
<p>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.</p>	<p>This manuscript presents a novel approach that integrates Lévy flight (LF) with local search techniques to identify divisors of odd composite integers, particularly semi-primes. The innovative method outlined in the paper demonstrates minimal space complexity and theoretically achieves logarithmic time complexity in optimal scenarios, which could significantly enhance computational efficiency in number theory and cryptography. The successful experiments conducted using MATLAB software indicate that this approach yields satisfactory results, suggesting its potential applicability in practical scenarios. However, the manuscript also highlights existing challenges, such as limitations in computing large integers and the need for improved programming techniques. These issues underscore the importance of further research and development in this area, making the manuscript a valuable contribution to ongoing discussions about efficient algorithms for integer factorization.</p>	
<p>Is the title of the article suitable? (If not please suggest an alternative title)</p>	<p>The title "Approach Derived from Lévy Flight to Identify a Divisor of an Odd Composite Integer" is quite suitable as it accurately reflects the core focus of the manuscript. It highlights the innovative method based on Lévy flight, which is central to the research, and specifies the application of this method in identifying divisors of odd composite integers, particularly semi-primes. This specificity is important, especially given the context of integer factorization's relevance in cryptography, as discussed in the paper abstract and introduction section.</p> <p>However, to enhance clarity and appeal, an alternative title could be "Leveraging Lévy Flight for Efficient Divisor Identification in Odd Composite Integers." This revised title maintains the original intent while emphasizing the efficiency of the proposed method, which is a significant contribution to the field.</p>	
<p>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.</p>	<p>The article's abstract offers a comprehensive summary of the research, yet it could benefit from enhancements to improve clarity and completeness. Here are some suggestions for improvement:</p> <ul style="list-style-type: none"> ○ Clarification of Key Terms: Although the abstract mentions "Lévy flight" and "local search techniques," it does not provide an explanation of these concepts. Adding a brief definition or context for these terms could help readers unfamiliar with them understand their significance in the study. ○ Results Summary: While the abstract states that the experiments yielded "highly satisfactory results," it lacks specific quantitative outcomes or comparisons to existing methods. Including a brief mention of the success rate or efficiency improvements observed in the experiments would provide a clearer picture of the method's effectiveness. <p>While the abstract is a good starting point, incorporating these suggestions could make it more comprehensive and informative.</p>	

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<p>Are subsections and structure of the manuscript appropriate?</p>	<p>The structure of the manuscript appears to be generally appropriate, but there are specific areas that could benefit from adjustments based on the provided contexts. Here are some observations and suggestions:</p> <ul style="list-style-type: none">o Clear Sectioning: The manuscript is divided into five main parts, which include an introduction, preliminary foundations, mathematical foundations, research objectives and results, and a conclusion. This structure is logical and allows for a progressive understanding of the topic.o Results and Discussion Section: There is a noted need for a dedicated results and discussion section. Currently, subsection 4.5.2 could be renamed or expanded to fulfill this role. This change would enhance clarity by separating the presentation of results from the discussion, allowing readers to better understand the implications of the findings.o Experimental Design: The description of the experimental design and results is somewhat scattered. Consolidating the experimental results into a single section with a table and comparisons	
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	Although the structure of the text is sound, these recommendations could enhance the overall efficacy of expressing the research findings and increase clarity and coherence.	
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 robustness and technical soundness through its innovative approach to integer factorization using Lévy flight (LF) techniques. The integration of LF with local search methods is well-founded, as it leverages established mathematical principles to address a significant problem in cryptography, particularly in relation to the RSA cryptosystem. Moreover, the experiments conducted show satisfactory results, indicating that the proposed method is effective in identifying divisors of odd composite integers, which is a critical aspect of the research. The	
Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form.	The references in the manuscript appear to be sufficient and may fully reflect the most recent advancements in the field of integer factorization. However, to strengthen the references, I suggest including some more recent studies that focus on advancements in factorization algorithms.	
Minor REVISION comments Is the language/English quality of the articles suitable for scholarly communications?	The language quality of the article appears to be suitable for scholarly communications with a clear structure, appropriate terminology, and a focus on experimental validation, although there are opportunities for further refinement in specific sections. For instance, the thoroughness and optimization of the programs do not affect the language quality. Instead, they highlight areas for future development, which is common in academic writing.	
Optional/General comments	<p>The manuscript should address the current approach's contribution. The introduction section must reveal the advantages or benefits of your current research method compared to others or existing research. This acknowledgement would provide a more balanced view of the research.</p> <p>Is it possible to give an SRW-blended LF flowchart? The "Algorithm of SRW-blended LF" section presents only the table description. Understanding the overview of the SRW-blended LF algorithm through a flowchart is an effective method. Authors can give the flowchart in the "4.4.3 Algorithm in Detail" section.</p> <p>Including a brief mention of potential future work or applications in the conclusion could enhance the manuscript's relevance and encourage further research in the field of integer factorization.</p> <p>Based on the evaluation of the manuscript, I would assign an overall mark of 8.5. This rating falls within the "Minor Revision" category.</p>	

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:	Md Al Amin Hossain
Department, University & Country	Selcuk University Konya, Türkiye