

ReviewForm3

JournalName:	AsianResearchJournalofMathematics
ManuscriptNumber:	Ms_ARJOM_130005
TitleoftheManuscript:	UltrafilterinGraphTheory:RelationshiptoTree-decomposition
TypeoftheArticle	ShortResearchArticle

PART1: 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. A minimum of 3-4 sentences may be required for this part.	This paper provides a valuable contribution to the scientific community by introducing a novel concept linking ultrafilters to graph theory. It deepens the understanding of tree-width and expands the applicability of mathematical filters in new contexts. This research can serve as a foundation for future studies exploring both theoretical and practical applications of these concepts.	
Is the title of the article suitable? (If not, please suggest an alternative title)	The title is appropriate but could be more precise in highlighting the duality between ultrafilters and tree-width. A suggested alternative title could be: "Ultrafilters and Their Dual Relationship to Tree-width in Graph Theory."	
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 is comprehensive but could benefit from additional details, such as: <ul style="list-style-type: none"> Emphasizing the importance of the dual relationship (duality). Highlighting potential applications of the concepts in other fields, such as network analysis. 	
Is the manuscript scientifically correct? Please write here.	The manuscript is scientifically robust, with well-presented proofs for the theorems.	
Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form.	The references are adequate, but it would be beneficial to include recent works that explore ultrafilters in computational or applied mathematics contexts.	
Is the language/English quality of the article suitable for scholarly communications?	The language is clear and suitable for scholarly communication, but minor improvements are recommended to enhance readability and reduce complexity.	
Optional/General comments		

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>	

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