Review Form 3

Journal Name:	**Asian Research Journal of Mathematics**
Manuscript Number:	**Ms_ARJOM_123858**
Title of the Manuscript:	**Shortest path problem under Pythagorean Fuzzy Network using Dijkstra's Algorithm**
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 paper is important in that it is presenting a method to determine shortest path in uncertain environment. The method is simple to apply. The paper is an extension of the well known Dijkstra's Algorithm.**	
Is the title of the article suitable? (If not please suggest an alternative title)	**The title of the article is suitable.**	
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.	**I suggest the author(s) use the word Objective / Aim instead of objectives. The paper seems to have one objective not objectives.**	
Are subsections and structure of the manuscript appropriate?	**I suggest that the authors have separate introduction and literature review sections. Thus, section 1 Introduction, Subsection 1.1 Motivation and Section 2 Literature review.**	
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 proposed method is scientifically correct and has proved to be applicable in a fuzzy environment. The correctness of the proposed method is backed by some mathematical expressions. The manuscript presents an extension of the Dijkstra' s algorithm.**	
Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form. -	**There is a need to first introduce the Shortest Path Problem (SPP) and then link it to the Fuzzy problem in the introduction section. There is a need to add references on SPP in the introduction section.**	

Review Form 3

Minor REVISION comments **Is the language/English quality of the article suitable for scholarly communications?**	1. There are several grammatical and typo errors (eg Dijkstra's is sometimes written as Dijkstr's). I suggest the authors read their manuscript 2-3 times. 2. There is a need to indicate the research gap 3. Figure 1 can be improved 4. The heading "Network Terminology" is not reflecting the contents of the section 5. The conclusion section can be improved by highlighting the advantages of the proposed method compared to the existing ones 6. The presentation of the algorithm in section 3 is not clear and needs to be improved (eg. After that, repeat the first step accurately (m-1) times, and then stop the process." This step is not clear since there are only two steps namely the Initialization step and the Main step?. I suggest that they number the steps as follows (Initialization Step, Step 1 (Main step) , Step 2 : Repeat the first step accurately (m-1) times, and then stop. Step 3: The matching …….. (Rephrase step 3). 7. I suggest you number your definition as Definition 1, Definition 2, etc. 8. Introduction section: When introducing the SPP and some related variants before linking it to the fuzzy you can consider citing the following articles on SPP: Tawanda, T., Munapo, E., Kumar, S., & Nyamugure, P. (2023). Extended TANYAKUMU Labelling Method to Compute Shortest Paths in Directed Networks. International Journal of Mathematical, Engineering and Management Sciences, Vol. 8, No. 5, pp. 991-1005. https://doi.org/10.33889/IJMEMS.2023.8.5.057 Tawanda T (2018) Determining k-possible critical paths using Tawanda's non-iterative optimal tree algorithm for shortest route problems, International Journal of Operational Research, Vol. 32, No. 3, pp.313–328. https://doi.org/10.1504/IJOR.2018.092737 Maposa D, Mupondo C.N, & Tawanda T (2014) Non-iterative algorithm for finding shortest route, International Journal of Logistics Economics and Globalization, Vol. 6, No.1, pp. 56 – 77. https://doi.org/10.1504/IJLEG.2014.064294 Minimum Spanning Tree Approach to Path Through K Specified Links (Kumar et al., 2023): https://doi.org/10.13052/jgeu0975-1416.1127	
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?	*(If yes, Kindly please write down the ethical issues here in details)*	

Reviewer Details:

Name:	**Trust Tawanda**
Department, University & Country	**National University of Science and Technology, Zimbabwe**