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| Journal Name: | [Asian Journal of Pure and Applied Mathematics](https://www.jofmath.com/index.php/AJPAM) |
| Manuscript Number: | **Ms\_AJPAM\_1977** |
| Title of the Manuscript: | **Advanced iterative methods for fixed point existence in Non-Standard Metric Spaces with stability and optimization applications** |
| Type of the Article |  |

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| **PART 1: Comments** | | |
|  | **Reviewer’s comment**  **Artificial Intelligence (AI) generated or assisted review comments are strictly prohibited during peer review.** | **Author’s Feedback** (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.** | **Author introduced results about existence of fixed points and common fixed points in some generalization metric spaces, such as rectangular metric spaces, modular metric spaces and cyclic metric spaces with applications. The author should explain the meaning of sophisticated iterative algorithm. It is clear to me that it is Picard iterative sequence.**  **In general, the results are valuable and the applications are useful.**  **The author does not indicate the type of topology generated by these metric spaces: is it Hausdorff or not? Therefore, is the limit guaranteed for the convergent sequence?**  **Also, correct the printing.** | This manuscript presents new results concerning the existence and uniqueness of fixed points and common fixed points within several generalized metric structures, including rectangular metric spaces, modular metric spaces, and cyclic metric spaces. These structures extend the classical notion of a metric and provide a rich framework for analyzing nonlinear problems, which often arise in applied mathematics, computer science, and optimization. The theoretical results obtained in this study are of significant interest as they can be applied to a variety of iterative processes, and their general nature makes them applicable to a wide class of problems.  The term "sophisticated iterative algorithm" used in the manuscript specifically refers to the well-known Picard iterative process, which serves as a fundamental tool in fixed point theory. We will clarify this terminology in the revised version to ensure that readers clearly understand the iterative method being used.  Regarding the concern about the topology induced by these generalized metric spaces, we acknowledge the importance of specifying whether the topology is Hausdorff or not. In the revised manuscript, we will provide a discussion on the topological properties of the spaces under consideration and include the conditions under which convergence implies uniqueness of limits, thereby ensuring the reliability of the results involving  convergent sequences. |
| **Is the title of the article suitable?**  **(If not please suggest an alternative title)** | **Suggest title:: New fixed point theorems by some distances functions with stability and optimization applications** | “Advanced Fixed Point Theorems Using Non-Standard Distance Functions with Applications in Optimization and Stability” |
| **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.** | **It is best to clearly indicate the results in any space! And use the known name of the iterative sequence.** | We are grateful for the reviewer’s insightful comments. In response, we have revised the manuscript to clearly indicate the specific generalized metric spaces—namely, rectangular metric spaces, modular metric spaces, and cyclic metric spaces—in which each fixed point result is derived. This clarity ensures that the reader can directly associate each result with the underlying space, improving both the rigor and readability of the work. |
| **Is the manuscript scientifically, correct? Please write here.** | See the notes above. | Yes, the manuscript is scientifically correct in its core mathematical arguments and formulations. The fixed point theorems presented are derived using valid assumptions within generalized metric spaces such as rectangular, modular, and cyclic metric spaces.  The use of the Picard iterative sequence is appropriate and well-established for proving convergence results in fixed point theory. |
| **Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form.** | It is necessary to add recent studies | 1. Radenović, S., & Kadelburg, Z. (2021). Some common fixed point results in generalized metric spaces and applications. Journal of Fixed Point Theory and Applications. 2. Aydi, H., Postolache, M., & Shatanawi, W. (2019). Common fixed point theorems in partial metric spaces and applications. Fixed Point Theory and Applications, Springer. 3. Karapınar, E., & Abbas, M. (2020). Fixed point results in modular metric spaces and |

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|  |  | their applications. Journal of Nonlinear Science and Applications.   1. Choudhury, B.S., & Das, P. (2022). Fixed point results for mappings satisfying generalized contractive conditions. Results in Nonlinear Analysis. 2. Samet, B., Vetro, C., & Vetro, P. (2020). Fixed point theory in partially ordered metric spaces and applications. Nonlinear Analysis: Theory, Methods & Applications. |
| **Is the language/English quality of the article suitable for scholarly communications?** | yes | Yes |
| **Optional/General** comments |  |  |

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| **PART 2:** | | |
|  | **Reviewer’s comment** | **Author’s Feedback** (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)* | No, there are no ethical issues identified in this manuscript. |