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| Journal Name: | [**Journal of Advances in Mathematics and Computer Science**](https://journaljamcs.com/index.php/JAMCS) |
| Manuscript Number: | **Ms\_JAMCS\_137531** |
| Title of the Manuscript: | **Analysis of Flow and Thermal Characteristics in a Closed Domain Containing Heat Source-Sink Saturated with Zn-water Nanofluids** |
| 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.** | This manuscript investigates the thermal and flow behavior of Zn-water nanofluids in a closed domain with internal heat sources and sinks. By focusing on the effects of Rayleigh number and nanoparticle volume fraction, the study provides detailed insights into how these parameters influence natural convection and heat transfer efficiency. The numerical analysis using the finite element method adds methodological value, and the results demonstrate that Zn-water nanofluids significantly enhance convective heat transfer. This contributes to the  growing body of research on nanofluids and supports their potential application in advanced thermal systems. |  |
| **Is the title of the article suitable?**  **(If not please suggest an alternative title)** | Yes |  |
| **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 provides a general overview of the study and identifies the key variables examined along with Zn– water nanofluid. The methodology is not clearly stated, and the abstract does not mention the numerical method used, which is central to the paper. Additionally, the abstract would benefit from the inclusion of specific, quantitative results (e.g., trends in Nusselt number) to better reflect the findings. |  |
| **Is the manuscript scientifically, correct? Please write here.** | The manuscript is scientifically correct in its methodology. It addresses a relevant heat transfer problem using an appropriate numerical approach.   * Results are validated qualitatively and align with known heat transfer behavior. However, please include legend in Fig. 2. Besides, please include discussion regarding the discrepancy between the present work and Reference [4]. * Please specify the references used in Table 2 and explain the criteria used to select them from the extensive correlations found in the current literature. |  |
| **Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form.** | Yes, sufficient. |  |
| **Is the language/English quality of the article suitable for scholarly communications?** | Generally ok, however, some sections contain grammatical and structural issues that reduce clarity. |  |
| **Optional/General** comments | * Please relates the current heat sources and sinks configurations with real world applications. * The research gap in the Introduction section is not clear. * Is it necessary to start the discussion with sentence like “**Fig-3 Discussion:** Explain how the streamlines and isotherms are affected by the Rayleigh number.”? |  |

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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)* |  |

**Reviewer details:**

**Ting Tiew Wei, University of Technology Sarawak, Malaysia**