|  |  |
| --- | --- |
| Journal Name: | [**Asian Research Journal of Mathematics**](https://journalarjom.com/index.php/ARJOM) |
| Manuscript Number: | **Ms\_ARJOM\_138339** |
| Title of the Manuscript: | **Mathematical Modelling of Hall Effect on a steady magneto-convection and radiative heat transfer past a porous plate** |
| Type of the Article |  |

**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 research contributes to the development of more efficient cooling systems, especially in high-temperature environments such as nuclear reactors, metallurgy, and aerospace engineering. The insights gained from this study can enhance the design and operation of MHD devices, ultimately aiding in improving machine performance, reducing energy losses, and advancing thermal management technologies in industrial processes. The mathematical modeling contributes to the development of more accurate and comprehensive simulation tools for multidisciplinary thermal-fluid systems. |  |
| **Is the title of the article suitable?**  **(If not please suggest an alternative title)** | **Yes,** Suitable , but too long , may be rephrased as :    “Modeling the Hall Effect in Steady Magneto-Convection with Radiative Heat Transfer over a  Porous Plate” |  |
| **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.** | **Yes.** |  |
| **Is the manuscript scientifically, correct? Please write here.** | There are many grammatical and structural issues. For ex.   1. In 1.0 Introduction, it looks like, [2], [3] , ….[8] is currently being used as a placeholder for a citation. It's better to mention the author's name(s) directly. Since [3] studied the effect of thermal radiation absorption , is not proper way. Replace [3] by author name. Repeat same for [2] to [8].      1. Also, in statement “ [2] Investigating the effect of viscous dissipation and joule heating “, capitalize Joule as it’s proper noun. Similarly, in whole research paper, replace hall by “ Hall” , as it’s proper noun.      1. The statement “Replacing the radiative flux 𝑞𝑟(4) and (5) we obtain” has no meaning.      1. In equation (9), u is defined in terms of , but  is not introduced anywhere.      1. In equation (11), (15) instead of 𝐸𝐶, it should be 𝐸𝐶.      1. After eq. (16), statement “By applying the shooting method.” is incomplete.      1. Many places , replace “Hartman number “ by “Hartmann number “ . The correct spelling includes **two "n"s** : **Hartmann**, not *Hartman*.      1. In 4.1, first statement says “Figure 2-4 shows the velocity’, it should be written as figures 2 to 4. , otherwise one may search for figure number 2.4. Similarly, in topic 4.2, there is statement, “Figure 59 illustrates”, say 5 to 9. |  |
| **Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form.** | The references cited in the paper are quite limited (only 8) and mostly dated up to only October 2020. It is recommended to include more recent studies to reflect the current state of research in this area and strengthen the literature review. |  |
| **Is the language/English quality of the article suitable for scholarly communications?** | Minor improvements in grammatical structure are needed. For ex.  In conclusion section, **present tense** should be used to describe **generalized findings.**  Instead of “The fluid velocity **decreased** with increase in Hartmann number (Magnetic parameter) “  It should be  “The fluid velocity **decreases** with an increase in the Hartmann number (magnetic parameter).” Same for all conclusion statements (i) to (vi) |  |
| **Optional/General** comments |  |  |

|  |  |  |
| --- | --- | --- |
| **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:**

**Anjali Kailas Shinde, K.R.T. Arts, B. H. Commerce and A.M. Science College, India**