



SDI Review Form 1.6

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| Journal Name: | Physical Science International Journal |
| Manuscript Number: | Ms_PSIJ_58219 |
| Title of the Manuscript: | ANALYSIS OF THERMAL DIFFUSION AND DIFFUSION THERMO EFFECTS ON AN UNSTEADY HEAT AND MASS TRANSFER MAGNETOHYDRODYNAMIC NATURAL CONVECTION COUETTE FLOW |
| Type of the Article | Original Research Article |

General guideline for Peer Review process:

This journal's peer review policy states that **NO** manuscript should be rejected only on the basis of '**lack of Novelty**', provided the manuscript is scientifically robust and technically sound. To know the complete guideline for Peer Review process, reviewers are requested to visit this link:

(<http://www.sciencedomain.org/journal/10/editorial-policy>)



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PART 1: Review Comments

| | 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) |
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| <p>Compulsory REVISION comments</p> | <ol style="list-style-type: none"> 1. The authors should list the references as the order in the introduction part. 2. "Raju et. al. 2016" which is mentioned in the introduction part (page 2) is not listed in the reference part. 3. "Rajput and Sahu. [19]" is not cited properly(see page 3 below equation 2.5). 4. Reference numbers 5 and 7 are identical. Authors must correct them. 5. "Raju et. al. [18]" on page 3 is not listed on the reference part. 6. On page 5.....Shiesser and Knapp 2008 are not cited properly. 7. Reference numbers 1 and 6 are not mentioned (cited) in the introduction part. 8. Make correction for "equation (2)..." on page 3. 9. Please check equation (2.6), it should be corrected. 10. Make correction for " using equation(5) and (6).....equation(2)..." on page 3 below equation (2.6) and ...equation (7) in the equation (2)...." above equation (2.7). 11. What is the need for writing the equation $\left(\frac{\partial \theta}{\partial t} = \frac{1}{Pr} \left(\frac{\partial^2 \theta}{\partial R^2} + D_r \frac{\partial^2 \phi}{\partial Y^2}\right)\right)$ below equation (3.3)?..(on page 5) 12. Make correction for (i) "...equation (2.20)-(2.22).." (ii) "...equation (20) on page 5. 13. Where are equations (21), (25), (28) , (29), (32) and (33)...see pages 6 and 7. 14. The considered ranges of governing parameters should be justified from practical point of view.Why in each of the graphs the horizontal axis extended to large number? Authors must explain this. 15. In result and discussion part the effects of Dufour and Soret are not discussed adequately. 16. Authors should compare their results with previously published papers. 17. Number of references is not enough and also authors should refer recent published works. I didn't see any reference after 2016....most of the cited references are old. 18. Address the originality of the current paper at the end of the introduction part so we can magnify that as bullet form. 19. In the conclusion part, check statement (4). I didn't find any agreement with Raju et. al. 2016.Show the agreement using table or graphs. 20. In general, this paper is the part of the article " Raju et. al., Thermal diffusion and diffusion thermo effects on an unsteady heat and mass transfer magnetohydrodynamic natural convection Couette flow using FEM, Journal of computational design and engineering 3(2016), 349-362". The authors should read this article carefully and incorporate some other effects in their research which are not available in Raju et al. 2016. | |
| <p>Minor REVISION comments</p> | <ol style="list-style-type: none"> 1. Make the graphs visible 2. In Introduction section authors must add the details and importance of thermal diffusion and diffusion thermo effects in the industrial application or in any other area of fields. 3. There are many typo errors throughout the manuscript. I suggest fixing such mistakes to achieve the journal standard for publication. There must be proper use of full stop or comma after each set of equations. | |



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| Optional/General comments | <ol style="list-style-type: none"> I recommend the authors to refer the following work(for Dufour and Soret effects): "Gossaye Aliy and Naikoti Kishan, Optimal Homotopy Asymptotic Solution for Cross-Diffusion effects on slip flow and heat transfer of electrical MHD non-Newtonian fluid over a slendering stretching sheet, Int. J. Appl. Comput. Math (2019) 5:80, https://doi.org/10.1007/s40819-019-0679-y" Add tables or draw graphs for the skin-friction coefficient, local Nusselt number and Sherwood number and make a comparison with previous results. | |
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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) |
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| Are there ethical issues in this manuscript? | <i>(If yes, Kindly please write down the ethical issues here in details)</i> | |

Reviewer Details:

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