

Best 25 Research publications for the last Five Years (2019-2024).

1. **Pentyala Srinivasa Rao** and Sandip Chowdhury, "Numerical study of Unsteady Bioconvective Transport of Oxytactic Microorganisms over a stretching Cone", ZAMM, Feb 2025 (Accepted). **index in: SCI**].
2. Prabir Barman, **P.S. Rao, B.V. Rathish Kumar**, "Entropy generation in a partially heated hybrid nanofluid saturated wavy porous cavity.", International Journal of Numerical Methods for heat and fluid flow, Feb 2024. [**Index in: SCIE**], doi.101108/HFF/08/2023/457.
3. Prabir Barman, **P.S. Rao, B.V. Rathish Kumar**, "Entropy generation in a partially heated hybrid nanofluid saturated wavy porous cavity.", International Journal of Numerical Methods for heat and fluid flow, Feb 2024. [**Index in: SCIE**], doi.101108/HFF/08/2023/457.
4. Amit Kumar Rahul, **P.S. Rao**, et. al. "Performance analysis of annular disks with non-Newtonian Rabinowitch fluid model: Influence of squeeze film pressure, surface roughness, porosity and viscosity variation", International Journal of Modern Physics: B, Accepted May, 2023. [**Index in: SCIE, Q3, IF-1.7**].
5. Om Prakash, **P.S. Rao**, et. al, "Hybrid nanofluid MHD motion towards an exponentially stretching/shrinking sheet with the effect of thermal radiation, heat source and viscous dissipation", Pramana Journal of Physics, 2023, 97: 64 April, 2023. [**Index in: SCIE, Q2,**]. <https://doi.org/10.1007/s12043-023-02533-0>.
6. Anil Kumar, **P.S. Rao**, "Numerical Study of periodically heated wall effect on natural convection in an enclosure", Mathematics and Computers in Simulation, Accepted on Jan, 2023.. [**Index in: SCIE, Q1, IF-4.6**].
7. Prabir Barman, **P.S. Rao**, "Numerical analysis of LTNE free convection in a porous enclosure with a wavy cold side wall", Proceedings of the Institution of Mechanical Engineers, Part E: Journal of Process Mechanical Engineering, Accepted on 21-11-2022. [**Index in: SCIE, Q3, IF-2.4**]
<https://doi.org/10.1177/09544089231154363>.
8. Om Prakash, N. Sandeep, Ram Prakash Sharma & **Pentyala Srinivasa Rao**, Influence of radiative heat on MHD Cu-Si/water dusty-nanoliquid flow above an enlarging sheet. Waves in Random and Complex Media, Oct - 2022. [**Index in: SCIE, Q1, IF-4.051**].
<https://doi.org/10.1080/17455030.2022.2141470>.
9. Om Prakash, Prabir Barman, **P. Srinivasa Rao** and R.P. Sharma, MHD free convection in a partially open wavy porous cavity filled with nanofluid. Numerical Heat Transfer, Part A: Applications, Published - Oct - 2022. [**Indexed in: SCIE, Q3, IF-2.0**].
<https://doi.org/10.1080/10407782.2022.2132330>.
10. Hari Babu, B., **P. S. Rao**, Machireddy Gnaneswara Reddy, and S. V. K. Varma. Non-Linear Radiation and Dissipative Impacts on Non-Newtonian Hydromagnetic Falkner-Skan Fluid through a Wedge. Waves in Random and Complex Media, September 19, 2022, 116. [**Index in: SCIE, Q1, IF-4.051**], <https://doi.org/10.1080/17455030.2022.2121448>.
11. Ram Prakash Sharma, Om Prakash, J. Rishid, S.B. Mishra, **Pentyala Srinivasa Rao et. al.**, "Nonlinear thermal radiation and heat source effects on unsteady electrical MHD motion of nanofluid past a stretching surface with binary chemical reaction"., The European Physical Journal Plus, 2022, 137-297 (Springer) [**Index in : SCIE, Q1**] .
<https://doi.org/10.1140/epjp/s13360-022-02359-6>.
12. Ram Prakash Sharma, Om Prakash, **Pentyala Srinivasa Rao et. al.**, "Thermal radiation and magnetic field effects on squeezing motion analysis for Cu-kerosene and Cu-water nanofluids", Heat Transfer. 2022, 1- 18 (Wiley) [**Index in : ESCI, Q2, IF-3.6**] .
DOI: 10.1002/htj.22404.

13. B. Haribabu, **Pentyala Srinivasa Rao** et. al. , "Numerical Modeling of activation energy and hydromagnetic non-Newtonian fluid particle deposition flow in a rotating disc", Journal of Process Mechanical Engineering, 1-10, 09544089211045907, Aug, 2021. [**Index in : SCIE, Q3, IF-2.4**] . <https://doi.org/10.1177/09544089211045907>.
14. B. Haribabu, **Pentyala Srinivasa Rao** et. al. , " Modeling of Cattaneo-Christov heat and mass flux on non-Newtonian hydromagnetic fluid with variable thermal and solutal properties", Journal of Process Mechanical Engineering, 09544089211046081, Aug, 2021. [**Index in : SCIE, Q3, IF-2.4**] . <https://doi.org/10.1177/09544089211046081>.
15. Prabir Barman and **Pentyala Srinivasa Rao**, "Natural Convection of nanofluids in a wavy porous cavity, "Proc. IMechE Part C: J Mechanical Engineering Science, 0(0) 1-17, August 2021. [Index in : SCIE, Q3, IF-2.0]. <https://doi.org/10.1177/09544062211042652>.
16. **Pentyala Srinivasa Rao**, Anil Kumar , "Effect of moving stretching sheets on natural convection in partially heated square cavity filled with nanofluid", International Journal of Nonlinear Sciences and Numerical Simulation , 283-297, December, 2021. [**Index in : SCIE, Q3, IF-1.5**] , <https://doi.org/10.1515/ijnsns-2018-0230>.
17. **Pentyala Srinivasa Rao**, Anil Kumar , "Unsteady MHD free convection flow past a vertical permeable flat plate in a rotating frame of reference with constant heat source and variable thermal boundary condition in a nanofluid", International Journal of Nonlinear Sciences and Numerical Simulation , 197-214, July 2021. , [**Index in : SCIE, Q2, IF-1.5**] . <https://doi.org/10.1515/ijnsns-2018-0028>.
18. Prabir Barman, **Pentyala Srinivasa Rao** , "Natural convection inside a heat source embedded wavy porous cavity containing an insulated obstacle", Journal of Process Mechanical Engineering, Part: E (Proceedings of Institute of Mechanical Engineering , Vol:235(5), 1694-1704, 2021 , [**Index in : SCIE, Q3, IF-2.4**] . DOI: <https://doi.org/10.1177/0954408921106212>.
19. B. Hari Babu, **Pentyala Srinivasa Rao** and Reddy M. Gnaneswara , " Physical aspects and stream line analysis on hydromagnetic nonlinear radiative flow of Carreau-Yasuda fluid", Physica Scripta 96 (2021), 025221 pages: 1-16. , [**Index in : SCIE, Q2, IF-2.9**] . DOI: <https://doi.org/10.1088/1402-4896/abd27e>.
20. **Pentyala Srinivasa Rao** and Prabir Barman , "Natural convection in a wavy porous cavity subjected to a partial heat source", International Communications in Heat and Mass Transfer, 120, 105007 Oct, 2020 , [**Index in : SCIE, Q1, IF-7.0**] . DOI: <https://doi.org/10.1016/j.icheatmasstransfer.2020.105007>.
21. **Pentyala Srinivasa Rao** and Anil Kumar , "Effect of heat generation and thermal radiation on heat transfer in porous enclosure having T - shape inner geometry", Journal of Process Mechanical Engineering, Part: E , 0(0), 1-7, Oct, 2020 , [**Index in : SCIE, Q2, IF-2.4**] . DOI: <https://doi.org/10.1177/0954408920973118>.
22. **Pentyala Srinivasa Rao** , Om Prakash et.al, "The transient natural convective magneto-hydrodynamic (MHD) motion of a nanofluid over a vertical surface under the influence of thermal radiation and heat generation", Indian Journal of Geo-Marine Sciences , Vol: 49 (05), 2020 pp. 889-897 , [**Index in : SCIE, Q4, IF-0.5**].
23. **Pentyala Srinivasa Rao** , Amit Kumar Rahul, "Combined effect of viscosity variation and non-Newtonian Rabinowitsch fluid in wide parallel rectangular -porous plate with squeeze-film characteristics", Meccanica, Vol: 54, pp: 2399 -2409, 2019 , [**Index in : SCIE, Q2, IF-2.7**]. DOI: <https://doi.org/10.1007/s11012-09-01092-2>.
24. **Pentyala Srinivasa Rao** , Amit Kumar Rahul, "Pressure generation in rough conical bearing using non-Newtonian Rabinowitsch fluid with variable viscosity", Industrial Lubrication and Tribology, Vol: 7, Issue:3 , pp: 357 - 365, 2019 , [**Index in : SCIE, Q4, IF-1.6**]. DOI: 10.1108/ILT- 01-2018-0035.

25. **Pentyala Srinivasa Rao** , Birendra Murmu and Santosh Agarwal, " A Comparison of Porous Structures on the Performance of Slider bearing with surface roughness in micropolar fluid film lubrication", Thermal Science , Vol. 23, No: 3B, pp: 1813 - 1824, 2019,[**Index in : SCIE, Q4, IF-1.7**], <https://doi.org/10.2298/TSCI170825304R>.
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