

Bibliography

- [1] A. Ajibade, A. Umar, Effects of viscous dissipation and boundary wall thickness on steady natural convection Couette flow with variable viscosity and thermal conductivity, International Journal of Thermofluids, 7(2020) 100052. <https://doi.org/10.1016/j.ijft.2020.100052>.
- [2] A. A. Afify, MHD free convective flow and mass transfer over a stretching sheet with chemical reaction, Heat and Mass Transfer, 40(2004) 495-500. <https://doi.org/10.1007/s00231-003-0486-0>.
- [3] A. T. Akinshilo, Mixed convective heat transfer analysis of MHD fluid flowing through an electrically conducting and non-conducting walls of a vertical micro-channel considering radiation effect, Applied Thermal Engineering, 156(2019) 506-513. <https://doi.org/10.1016/j.applthermaleng.2019.04.100>.
- [4] A. Bejan, A study of entropy generation in fundamental convective heat transfer, Journal of heat transfer, 101(1979) 718-725. <https://doi.org/10.1115/1.3451063>.
- [5] A. Bejan, Second law analysis in heat transfer, Energy, 5(1980) 720-732. [https://doi.org/10.1016/0360-5442\(80\)90091-2](https://doi.org/10.1016/0360-5442(80)90091-2).
- [6] A. Borrelli, G. Giantesio, M. C. Patria, N. C. Roșca, A. V. Roșca, I. Pop, Buoyancy effects on the 3D MHD stagnation-point flow of a Newtonian fluid, Communications in Nonlinear Science and Numerical Simulation, 43(2017) 1-13. <https://doi.org/10.1016/j.cnsns.2016.06.022>.
- [7] A. Chamkha, Mass transfer with chemical reaction in MHD mixed convective flow along a vertical stretching sheet, International Journal of Energy & Technology, 4(2012) 1-12.
- [8] A. J. Chamkha, A. M. Rashad, Unsteady heat and mass transfer by MHD mixed convection flow from a rotating vertical cone with chemical reaction

- and Soret and Dufour effects, *The Canadian Journal of Chemical Engineering*, 92(2014) 758-767. <https://doi.org/10.1002/cjce.21894>.
- [9] A. C. Eringen, Theory of micropolar fluids, *Journal of mathematics and Mechanics*, 16(1966) 1-18. <https://www.jstor.org/stable/24901466>.
 - [10] A. C. Eringen, Theory of thermomicrofluids, *Journal of Mathematical analysis and Applications*, 38(1972) 480-496. [https://doi.org/10.1016/0022-247X\(72\)90106-0](https://doi.org/10.1016/0022-247X(72)90106-0).
 - [11] A. Idowu, M. Akolade, J. Abubakar, B. Falodun, MHD free convective heat and mass transfer flow of dissipative Casson fluid with variable viscosity and thermal conductivity effects, *Journal of Taibah University for Science*, 14(2020) 851-862. <https://doi.org/10.1080/16583655.2020.1781431>.
 - [12] A. Ishak, Unsteady MHD flow and heat transfer over a stretching plate, *Journal of Applied Sciences*, 10(2010) 2127-2131. <https://dx.doi.org/10.3923/jas.2010.2127.2131>.
 - [13] A. V. Lemoff, A. P. Lee, An AC magnetohydrodynamic micropump, *Sensors and Actuators B: Chemical*, 63(2000) 178–185. [https://doi.org/10.1016/S0925-4005\(00\)00355-5](https://doi.org/10.1016/S0925-4005(00)00355-5).
 - [14] A. S. Mittal, H. R. Patel, R. R. Darji, Mixed Convection Micropolar Ferrofluid Flow with Viscous Dissipation, Joule Heating and Convective Boundary Conditions, *International Communications in Heat and Mass Transfer*, 108(2019) 104320. <https://doi.org/10.1016/j.icheatmasstransfer.2019.104320>.
 - [15] A. S. Mittal, H. R. Kataria, Three dimensional CuO-Water nanofluid flow considering Brownian motion in presence of radiation, *Karbala International Journal of Modern Science*, 4(2018) 275-286. <https://doi.org/10.1016/j.kijoms.2018.05.002>.
 - [16] A. S. Mittal, H. R. Patel, Influence of thermophoresis and Brownian motion on mixed convection two dimensional MHD Casson fluid flow with non-linear radiation and heat generation, *Physica A: Statical Mechanicsa and its Applications*, 537(2020) 122710. <https://doi.org/10.1016/j.physa.2019.122710>.
 - [17] A. M. Rashad, S. Abbasbandy, A. J. Chamkha, Mixed convection flow of a micropolar fluid over a continuously moving vertical surface immersed in

- a thermally and solutally stratified medium with chemical reaction, Journal of the Taiwan Institute of Chemical Engineers, 45(2014) 2163-2169. <https://doi.org/10.1016/j.jtice.2014.07.002>.
- [18] A. Raptis, A. K. Singh, MHD free convection flow past an accelerated vertical plate, International Communications in Heat and Mass Transfer, 10(1983) 313-321. [https://doi.org/10.1016/0735-1933\(83\)90016-7](https://doi.org/10.1016/0735-1933(83)90016-7).
 - [19] A. Ullah, A. Hafeez, W. K. Mashwani, W. Kumam, P. Kumam, M. Ayaz, Non-linear thermal radiations and mass transfer analysis on the processes of magnetite carreau fluid flowing past a permeable stretching/shrinking surface under cross diffusion and Hall effect, Coatings, 10(2020) 523. <https://doi.org/10.3390/coatings10060523>.
 - [20] B. J. Gireesha, A. Roja, Second law analysis of MHD natural convection slip flow of Casson fluid through an inclined microchannel, Multidiscipline Modeling in Materials and Structures, 16(2020) 1435-1455. <https://doi.org/10.1108/MMMS-11-2019-0189>.
 - [21] B. Gireesha, M. Umeshia, B. Prasannakumara, N. Shashikumar, M. Archana, Impact of nonlinear thermal radiation on magnetohydrodynamic three dimensional boundary layer flow of Jeffrey nanofluid over a nonlinearily permeable stretching sheet, Physica A: Statistical Mechanics and its Applications, 549(2020) 124051. <https://doi.org/10.1016/j.physa.2019.124051>.
 - [22] B. Gireesha, M. Archana, P. Kumar, R. Gorla, Significance of temperature dependent viscosity, nonlinear thermal radiation and viscous dissipation on the dynamics of water conveying cylindrical and brick shaped molybdenum disulphide nanoparticles, International Journal of Applied and Computational Mathematics, 5(2019) 1-15. <https://doi.org/10.1007/s40819-019-0649-4>.
 - [23] B. Raftari, K. Vajravelu, Homotopy analysis method for MHD viscoelastic fluid flow and heat transfer in a channel with a stretching wall, Communications in nonlinear science and numerical simulation, 17(2012) 4149-4162. <https://doi.org/10.1016/j.cnsns.2012.01.032>.
 - [24] B. K. Swain, B. C. Parida, S. Kar, N. Senapati, Viscous dissipation and joule heating effect on MHD flow and heat transfer past a stretching sheet embedded in a porous medium, Heliyon, 6(2020) e05338. <https://doi.org/10.1016/j.heliyon.2020.e05338>.

- [25] C. C. Cho, Mixed convection heat transfer and entropy generation of Cu-water nanofluid in wavy-wall lid-driven cavity in presence of inclined magnetic field, International Journal of Mechanical Sciences, 151(2019) 703-714. <https://doi.org/10.1016/j.ijmecsci.2018.12.017>.
- [26] C. J. Huang, Influence of non-Darcy and MHD on free convection of non-Newtonian fluids over a vertical permeable plate in a porous medium with soret/dufour effects and thermal radiation, International Journal of Thermal Sciences, 130(2018) 256-263. <https://doi.org/10.1016/j.ijthermalsci.2018.04.019>.
- [27] D. D. Gray, A. Giorgini, The validity of the Boussinesq approximation for liquids and gases, International Journal of Heat and Mass Transfer, 19(1976) 545-551. [https://doi.org/10.1016/0017-9310\(76\)90168-X](https://doi.org/10.1016/0017-9310(76)90168-X).
- [28] D. Pal, G. Mandal, K. Vajravalu, Soret and Dufour effects on MHD convective-radiative heat and mass transfer of nanofluids over a vertical non-linear stretching/shrinking sheet, Applied Mathematics and Computation, 287(2016) 184-200. <https://doi.org/10.1016/j.amc.2016.04.037>.
- [29] F. Mabood, W. A. Khan, A. I. M. Ismail, Approximate analytical modeling of heat and mass transfer in hydromagnetic flow over a non-isothermal stretched surface with heat generation/absorption and transpiration, Journal of the Taiwan Institute of Chemical Engineers, 54(2015) 11-19. <https://doi.org/10.1016/j.jtice.2015.03.022>.
- [30] F. Mabood, T. Yusuf, G. Bognár, Features of entropy optimization on MHD couple stress nanofluid slip flow with melting heat transfer and nonlinear thermal radiation, Scientific Reports, 10(2020) 1-13. <https://doi.org/10.1038/s41598-020-76133-y>.
- [31] F. Sultan, S. Mustafa, W. Khan, M. Shahzad, M. Ali, W. Adnan, S. Rehman, A numerical treatment on rheology of mixed convective Carreau nanofluid with variable viscosity and thermal conductivity, Applied Nanoscience, 10(2020) 3295-3303. <https://doi.org/10.1007/s13204-020-01294-1>.
- [32] F. A. Soomro, M. Usman, R. U. Haq, W. Wang, Thermal and velocity slip effects on MHD mixed convection flow of Williamson nanofluid along a vertical surface: Modified Legendre wavelets approach, Physica E: Low-dimensional Systems and Nanostructures, 104(2018) 130-137. <https://doi.org/10.1016/j.physe.2018.07.002>.

- [33] F. Selimefendigil, H. F. Öztop, MHD mixed convection and entropy generation of power law fluids in a cavity with a partial heater under the effect of a rotating cylinder, International Journal of Heat and Mass Transfer, 98(2016) 40-51. <https://doi.org/10.1016/j.ijheatmasstransfer.2016.02.092>.
- [34] F. Wang, M. I. Asjad, M. Zahid, A. Iqbal, H. Ahmad, M. D. Alsulami, Unsteady Thermal Transport Flow of Casson Nanofluids with Generalized Mittag-Leffler Kernel of Prabhakar's Type, Journal of Materials Research and Technology, 14(2021) 1292–1300. <https://doi.org/10.1016/j.jmrt.2021.07.029>.
- [35] G. Lukaszewicz, Micropolar fluids: theory and applications, Springer Science & Business Media, (1999).
- [36] G. Nagaraju, J. Srinivas, J. R. Murthy, A. M. Rashad, Entropy generation analysis of the MHD flow of couple stress fluid between two concentric rotating cylinders with porous lining, Heat Transfer-Asian Research, 46(2017) 316-330. <https://doi.org/10.1002/htj.21214>.
- [37] G. J. Reddy, R. S. Raju, J. A. Rao, Influence of viscous dissipation on unsteady MHD natural convective flow of Casson fluid over an oscillating vertical plate via FEM, Ain Shams Engineering Journal, 9(2018) 1907-1915. <https://doi.org/10.1016/j.asej.2016.10.012>.
- [38] H. R. Patel, A. S. Mittal, R. R. Darji, MHD Flow of Micropolar Nanofluid over a Stretching/Shrinking Sheet Considering Radiation, International Communications in Heat and Mass Transfer, 108(2019) 104322. <https://doi.org/10.1016/j.icheatmasstransfer.2019.104322>.
- [39] H. R. Kataria, A. S. Mittal, Mathematical model for velocity and temperature of gravity-driven convective optically thick nanofluid flow past an oscillating vertical plate in presence of magnetic field and radiation, Journal of Nigerian Mathematical Society, 34(2015) 303-317. <https://doi.org/10.1016/j.jnnms.2015.08.005>.
- [40] H. R. Kataria, A. S. Mittal, Velocity, Mass and Temperature Analysis of Gravity-Driven Convection Nanofluid Flow Past an Oscillating Vertical Plate in the Presence of Magnetic Field in a Porous Medium, Applied Thermal Engineering, 110(2017a) 864-874. <https://doi.org/10.1016/j.applthermaleng.2016.08.129>.

- [41] H. R. Kataria, H. R. Patel, Radiation and chemical reaction effects on MHD Casson fluid flow past an oscillating vertical plate embedded in porous medium, Alexandria Engineering Journal, 55(2016) 583-595. <https://doi.org/10.1016/j.aej.2016.01.019>.
- [42] H. R. Kataria, H. R. Patel, Soret and heat generation effects on MHD Casson fluid flow past an oscillating vertical plate embedded through porous medium, Alexandria Engineering Journal, 55(2016) 2125-2137. <https://doi.org/10.1016/j.aej.2016.06.024>.
- [43] H. R. Kataria, H. R. Patel, Effects of chemical reaction and heat generation/absorption on magnetohydrodynamic (MHD) Casson fluid flow over an exponentially accelerated vertical plate embedded in porous medium with ramped wall temperature and ramped surface concentration, Propulsion and Power Research 8(2019) 35-46. <https://doi.org/10.1016/j.jppr.2018.12.001>.
- [44] H. R. Kataria, H. R. Patel, R. Singh, Effect of magnetic field on unsteady natural convective flow of a micropolar fluid between two vertical walls, Ain Shams Engineering Journal, 8(2017) 87-102. <https://doi.org/10.1016/j.asej.2015.08.013>.
- [45] H. Kataria, H. Patel, Effect of thermo-diffusion and parabolic motion on MHD Second grade fluid flow with ramped wall temperature and ramped surface concentration, Alexandria engineering journal, 57(2018) 73-85. <https://doi.org/10.1016/j.aej.2016.11.014>.
- [46] H. F. Öztop, N. S. Bondareva, M. A. Sheremet, N. Abu-Hamdeh, Unsteady natural convection with entropy generation in partially open triangular cavities with a local heat source, International Journal of Numerical Methods for Heat & Fluid Flow, 27(2017) 2696-2716. <https://doi.org/10.1108/HFF-12-2016-0510>.
- [47] H. S. Takhar, A. A. Raptis, C. P. Perdikis, MHD asymmetric flow past a semi-infinite moving plate, Acta Mechanica, 65(1987) 287-290. <https://doi.org/10.1007/BF01176888>.
- [48] H. Vaidya, C. Rajashekhar, F. Mebarek-Oudina, K. V. Prasad, K. Vajravelu, B. Ramesh Bhat, Examination of Chemical Reaction on Three Dimensional Mixed Convective Magnetohydrodynamic Jeffrey Nanofluid Over a Stretching Sheet, Journal of Nanofluids, 11(2022) 113-124. <https://doi.org/10.1166/jon.2022.1817>.

- [49] J. Hartmann, Hg-dynamics I theory of the laminar flow of an electrically conductive liquid in a homogenous magnetic field, Det Kal. Danske Videnskabernes selskab, Mathematisk-fysiske Meddeleser, 15(1937) 1-27.
- [50] J. Wang, R. Muhammad, M. I. Khan, W. A. Khan, S. Z. Abbas, Entropy optimized MHD nanomaterial flow subject to variable thicked surface, Computer Methods and Programs in Biomedicine, 189(2020) 105311. <https://doi.org/10.1016/j.cmpb.2019.105311>.
- [51] J. Zhong, M. Yi, H. H. Bau, Magnetohydrodynamic (MHD) pump fabricated with ceramic tapes, Sensors and Actuators A: Physical, 96(2002) 59–66. [https://doi.org/10.1016/S0924-4247\(01\)00764-6](https://doi.org/10.1016/S0924-4247(01)00764-6).
- [52] K. Anantha Kumar, V. Sugunamma, N. Sandeep, Physical aspects on unsteady MHD-free convective stagnation point flow of micropolar fluid over a stretching surface, Heat Transfer—Asian Research, 48(2019) 3968-3985. <https://doi.org/10.1002/htj.21577>.
- [53] K. Aslani, U. S. Mahabaleshwar, J. Singh, I. E. Sarris, Combined effect of radiation and inclined MHD flow of a micropolar fluid over a porous stretching/shrinking sheet with mass transpiration, International Journal of Applied and Computational Mathematics, 7(2021) 1-21. <https://doi.org/10.1007/s40819-021-00987-7>.
- [54] K. Batchlor, An introduction to fluid dynamics, London: Cambridge University Press, 158(1987).
- [55] K. G. Kumar, G. K. Ramesh, B. J. Gireesha, R. S. R. Gorla, Characteristics of Joule heating and viscous dissipation on three-dimensional flow of Oldroyd B nanofluid with thermal radiation, Alexandria Engineering Journal, 57(2018) 2139-2149. <https://doi.org/10.1016/j.aej.2017.06.006>.
- [56] K. Jabeen, M. Mushtaq, R. M. A. Muntazir, Analysis of MHD Fluids around a Linearly Stretching Sheet in Porous Media with Thermophoresis, Radiation and Chemical Reaction, Mathematical Problems in Engineering, 2020(2020) 9685482. <https://doi.org/10.1155/2020/9685482>.
- [57] K. L. Hsiao, Combined electrical MHD heat transfer thermal extrusion system using Maxwell fluid with radiative and viscous dissipation effects, Applied Thermal Engineering, 112(2017) 1281-1288. <https://doi.org/10.1016/j.applthermaleng.2016.08.208>.

- [58] K. R. Rajagopal, M. Ruzicka, A. R. Srinivasa, On the Oberbeck-Boussinesq approximation, Mathematical Models and Methods in Applied Sciences, 6(1996). 1157-1167. <https://doi.org/10.1142/S0218202596000481>.
- [59] K. U. Rehman, A. S. Alshomrani, M. Y. Malik, Carreau fluid flow in a thermally stratified medium with heat generation/absorption effects, Case studies in thermal engineering, 12(2018) 16-25. <https://doi.org/10.1016/j.csite.2018.03.001>.
- [60] K. Sarada, R. J. P. Gowda, I. E. Sarris, R. N. Kumar, B. C. Prasannakumara, Effect of Magnetohydrodynamics on Heat Transfer Behaviour of a Non-Newtonian Fluid Flow over a Stretching Sheet under Local Thermal Non-Equilibrium Condition, Fluids, 6(2021) 264. <https://doi.org/10.3390/fluids6080264>.
- [61] K. Sharma, K. Bhaskar, Influence of Soret and Dufour on Three-Dimensional MHD Flow Considering Thermal Radiation and Chemical Reaction, International Journal of Applied and Computational Mathematics, 6(2020) 1-17. <https://doi.org/10.1007/s40819-019-0753-5>.
- [62] K. A. Yih, Free convection effect on MHD coupled heat and mass transfer of a moving permeable vertical surface, International Communications in Heat and Mass Transfer, 26(1999) 95-104. [https://doi.org/10.1016/S0735-1933\(98\)00125-0](https://doi.org/10.1016/S0735-1933(98)00125-0).
- [63] L. A. Lund, Z. Omar, S. Dero, I. Khan, Linear stability analysis of MHD flow of micropolar fluid with thermal radiation and convective boundary condition: Exact solution, Heat Transfer—Asian Research, 49(2020) 461-476. <https://doi.org/10.1002/htj.21621>.
- [64] M. S. Astanina, M. A. Sheremet, H. F. Öztürk, N. Abu-Hamdeh, MHD natural convection and entropy generation of ferrofluid in an open trapezoidal cavity partially filled with a porous medium, International Journal of Mechanical Sciences, 136(2018) 493-502. <https://doi.org/10.1016/j.ijmecsci.2018.01.001>.
- [65] M. Bibi, A. Zeeshan, M. Malik, Numerical analysis of unsteady flow of three-dimensional Williamson fluid-particle suspension with MHD and nonlinear thermal radiations, The European Physical Journal Plus, 135(2020) 1-26. <https://doi.org/10.1140/epjp/s13360-020-00857-z>.]

- [66] M. Bhatti, L. Phali, C. M. Khalique, Heat transfer effects on electro-magnetohydrodynamic Carreau fluid flow between two micro-parallel plates with Darcy-Brinkman-Forchheimer medium, *Archive of Applied Mechanics*, 91(2021) 1683-1695. <https://doi.org/10.1007/s00419-020-01847-4>.
- [67] M. Dada, C. Onwubuoya, Variable viscosity and thermal conductivity effects on Williamson fluid flow over a slendering stretching sheet, *World Journal of Engineering*, 17(2020) 357-371. <https://doi.org/10.1108/WJE-08-2019-0222>.
- [68] M. F. El-Amin, Magnetohydrodynamic free convection and mass transfer flow in micropolar fluid with constant suction, *Journal of magnetism and magnetic materials*, 234(2001) 567-574. [https://doi.org/10.1016/S0304-8853\(01\)00374-2](https://doi.org/10.1016/S0304-8853(01)00374-2).
- [69] M. Farooq, M. I. Khan, M. Waqas, T. Hayat, A. Alsaedi, M. I. Khan, MHD Stagnation Point Flow of Viscoelastic Nanofluid with Non-Linear Radiation Effects, *Journal of Molecular Liquids*, 221(2016) 1097–1103. <https://doi.org/10.1016/j.molliq.2016.06.077>.
- [70] M. A. Hossain, Viscous and Joule heating effects on MHD free convection flow with variable plate temperature (No. IC-90/265). International Centre for Theoretical Physics, (1990).
- [71] M. Hussain, A. Ghaffar, A. Ali, A. Shahzad, K. Nisar, M. Alharthi, W. Jamshed, MHD thermal boundary layer flow of a Casson fluid over a penetrable stretching wedge in the existence of nonlinear radiation and convective boundary condition, *Alexandria Engineering Journal*, 60(2021) 5473-5483. <https://doi.org/10.1016/j.aej.2021.03.042>.
- [72] M. Imtiaz, H. Nazar, T. Hayat, A. Alsaedi, Soret and Dufour effects in the flow of viscous fluid by a curved stretching surface, *Pramana*, 94(2020) 1-11. <https://doi.org/10.1007/s12043-020-1922-0>.
- [73] M. Kayalvizhi, R. Kalaivanan, N. V. Ganesh, B. Ganga, A. A. Hakeem, Velocity slip effects on heat and mass fluxes of MHD viscous–Ohmic dissipative flow over a stretching sheet with thermal radiation, *Ain Shams Engineering Journal*, 7(2016) 791-797. <https://doi.org/10.1016/j.asej.2015.05.010>.
- [74] M. I. Khan, F. Alzahrani, Activation Energy and Binary Chemical Reaction Effect in Nonlinear Thermal Radiative Stagnation Point Flow of Walter-B Nanofluid: Numerical Computations, *International Journal of Modern Physics B*, 34(2020) 2050132. <https://doi.org/10.1142/S0217979220501325>.

- [75] M. I. Khan, A. Kumar, T. Hayat, M. Waqas, R. Singh, Entropy generation in flow of Carreau nanofluid, *Journal of Molecular Liquids*, 278(2019) 677-687. <https://doi.org/10.1016/j.molliq.2018.12.109>.
- [76] M. V. Krishna, K. Vajravelu, Hall effects on the unsteady MHD flow of the Rivlin-Ericksen fluid past an infinite vertical porous plate, *Waves in Random and Complex Media*, (2022)1-24. <https://doi.org/10.1080/17455030.2022.2084178>.
- [77] M. Massoudi, I. Christie, Effects of variable viscosity and viscous dissipation on the flow of a third grade fluid in a pipe, *International Journal of Non-Linear Mechanics*, 30(1995) 687-699. [https://doi.org/10.1016/0020-7462\(95\)00031-I](https://doi.org/10.1016/0020-7462(95)00031-I).
- [78] M. Madhu, B. Mahanthesh, N. S. Shashikumar, S. A. Shehzad, S. U. Khan, B. J. Gireesha, Performance of second law in Carreau fluid flow by an inclined microchannel with radiative heated convective condition, *International Communications in Heat and Mass Transfer*. 117(2020) 104761. <https://doi.org/10.1016/j.icheatmasstransfer.2020.104761>.
- [79] M. K. Nayak, A. A. Hakeem, B. Ganga, M. I. Khan, M. Waqas, O. D. Makinde, Entropy optimized MHD 3D nanomaterial of non-Newtonian fluid: a combined approach to good absorber of solar energy and intensification of heat transport, *Computer methods and programs in biomedicine*, 186(2020) 105131. <https://doi.org/10.1016/j.cmpb.2019.105131>.
- [80] M. K. Nayak, S. Shaw, A.J. Chamkha, 3D MHD Free Convective Stretched Flow of a Radiative Nanofluid Inspired by Variable Magnetic Field, *Arabian Journal of science and engineering*, 44(2019) 1269-1282. <https://doi.org/10.1007/s13369-018-3473-y>.
- [81] M. K. Nayak, N. S. Akbar, D. Tripathi, V. S. Pandey, Three dimensional MHD flow of nanofluid over an exponential porous stretching sheet with convective boundary conditions, *Thermal Science and Engineering Progress*, 3(2017) 133-140. <https://doi.org/10.1016/j.tsep.2017.07.006>.
- [82] M. K. Nayak, G. C. Dash, L. P. Singh, Heat and mass transfer effects on MHD viscoelastic fluid over a stretching sheet through porous medium in presence of chemical reaction, *Propulsion and Power Research*, 5(2016) 70-80. <https://doi.org/10.1016/j.jppr.2016.01.006>.

- [83] M. Ramzan, M. Farooq, T. Hayat, J. D. Chung, Radiative and Joule heating effects in the MHD flow of a micropolar fluid with partial slip and convective boundary condition, *Journal of Molecular Liquids*, 221(2016) 394-400. <https://doi.org/10.1016/j.molliq.2016.05.091>.
- [84] M. M. Rashidi, S. Abelman, N. F. Mehr, Entropy generation in steady MHD flow due to a rotating porous disk in a nanofluid, *International journal of Heat and Mass transfer*, 62(2013) 515-525. <https://doi.org/10.1016/j.ijheatmasstransfer.2013.03.004>.
- [85] M. M. Rashidi, B. Rostami, N. Freidoonimehr, S. Abbasbandy, Free convective heat and mass transfer for MHD fluid flow over a permeable vertical stretching sheet in the presence of the radiation and buoyancy effects, *Ain Shams Engineering Journal*, 5(2014) 901-912. <https://doi.org/10.1016/j.asej.2014.02.007>.
- [86] M. M. Rashidi, S. A. Mohimanian Pour, A novel analytical solution of heat transfer of a micropolar fluid through a porous medium with radiation by DTM-Padé, *Heat Transfer-Asian Research*, 39(2010) 575-589. <https://doi.org/10.1002/htj.20317>.
- [87] M. G. Reddy, P. Padma, B. Shankar, Effects of viscous dissipation and heat source on unsteady MHD flow over a stretching sheet, *Ain Shams Engineering Journal*, 6(2015) 1195-1201. <https://doi.org/10.1016/j.asej.2015.04.006>.
- [88] M. Sheikholeslami, H. R. Kataria, A. S. Mittal, Radiation Effects on Heat Transfer of Three Dimensional Nanofluid Flow Considering Thermal Interfacial Resistance and Micro Mixing in Suspensions, *Chinese Journal of Physics*, 55(2017) 2254–2272. <https://doi.org/10.1016/j.cjph.2017.09.010>.
- [89] M. Sheikholeslami, H. R. Kataria, A. S. Mittal, Effect of thermal diffusion and heat-generation on MHD nanofluid flow past an oscillating vertical plate through porous medium, *Journal of Molecular Liquids*, 257(2018) 12-25. <https://doi.org/10.1016/j.molliq.2018.02.079>.
- [90] M. Sheikholeslami, D. D. Ganji, M. Y. Javed, R. Ellahi, Effect of thermal radiation on magnetohydrodynamics nanofluid flow and heat transfer by means of two phase model, *Journal of magnetism and Magnetic materials*, 374(2015) 36-43. <https://doi.org/10.1016/j.jmmm.2014.08.021>.
- [91] M. Sulemana, I. Y. Seini, O. D. Makinde, Hydrodynamic Boundary Layer Flow of Chemically Reactive Fluid over Exponentially Stretching Vertical Surface with Transverse Magnetic Field in Unsteady

- Porous Medium, Journal of Applied Mathematics, 2022(2022) 7568695.
<https://doi.org/10.1155/2022/7568695>.
- [92] M. Turkyilmazoglu, MHD fluid flow and heat transfer due to a stretching rotating disk, International journal of thermal sciences, 51(2012) 195-201.
<https://doi.org/10.1016/j.ijthermalsci.2011.08.016>.
- [93] M. Turkyilmazoglu, I. Pop, Exact analytical solutions for the flow and heat transfer near the stagnation point on a stretching/shrinking sheet in a Jeffrey fluid, International Journal of Heat and Mass Transfer, 57(2013) 82-88.
<https://doi.org/10.1016/j.ijheatmasstransfer.2012.10.006>.
- [94] M. Turkyilmazoglu, MHD fluid flow and heat transfer due to a shrinking rotating disk, Computers & Fluids, 90(2014) 51-56.
<https://doi.org/10.1016/j.compfluid.2013.11.005>.
- [95] M. Usman, Z. H. Khan, M. B. Liu, MHD natural convection and thermal control inside a cavity with obstacles under the radiation effects, Physica A: Statical Mechanics and its applications, 535(2019) 122443.
<https://doi.org/10.1016/j.physa.2019.122443>.
- [96] M. Waqas, M. Farooq, M. I. Khan, A. Alsaedi, T. Hayat, T. Yasmeen, Magnetohydrodynamic (MHD) mixed convection flow of micropolar liquid due to nonlinear stretched sheet with convective condition, International Journal of Heat and Mass Transfer, 102(2016) 766-772.
<https://doi.org/10.1016/j.ijheatmasstransfer.2016.05.142>.
- [97] N. Kumar, S. Gupta, MHD free-convective flow of micropolar and Newtonian fluids through porous medium in a vertical channel, Meccanica, 47(2012) 277-291. <https://doi.org/10.1007/s11012-011-9435-z>.
- [98] N. K. Ranjit, G. C. Shit, Entropy generation on electromagnetohydrodynamic flow through a porous asymmetric micro-channel, European Journal of Mechanics-B/Fluids, 77(2019) 135-147.
<https://doi.org/10.1016/j.euromechflu.2019.05.002>.
- [99] N. R. Devi, M. Shivananda, H. F. Öztürk, N. Abu-Hamdeh, P. Padmanathan, A. Satheesh, A review on ferrofluids with the effect of MHD and entropy generation due to convective heat transfer, The European Physical Journal Plus, 137(2022) 482. <https://doi.org/10.1140/epjp/s13360-022-02616-8>.

- [100] N. Z. Basha, K. Vajravelu, F. Mebarek-Oudina, I. Sarris, K. Vaidya, K. V. Prasad, C. Rajashekhar, MHD Carreau nanoliquid flow over a nonlinear stretching surface, *Heat Transfer*, 51(2022) 5262-5287. <https://doi.org/10.1002/htj.22546>.
- [101] O. A. Bég, A. Y. Bakier, V. R. Prasad, Numerical study of free convection magnetohydrodynamic heat and mass transfer from a stretching surface to a saturated porous medium with Soret and Dufour effects, *Computational Materials Science*, 46 (2009) 57-65. <https://doi.org/10.1016/j.commatsci.2009.02.004>.
- [102] P. J. Carreau, D. Kee, M. Daroux, An analysis of the viscous behaviour of polymeric solutions, *The Canadian Journal of Chemical Engineering*, 57(1979) 135-140. <https://doi.org/10.1002/cjce.5450570202>.
- [103] P. S. Reddy, A. J. Chamkha, A. Al-Mudhaf, MHD heat and mass transfer flow of a nanofluid over an inclined vertical porous plate with radiation and heat generation/absorption, *Advanced Powder Technology*, 28(2017) 1008-1017. <https://doi.org/10.1016/j.apt.2017.01.005>.
- [104] P. G. Siddheshwar, U. S. Mahabaleswar, H. I. Andersson, A new analytical procedure for solving the non-linear differential equation arising in the stretching sheet problem, *International Journal of Applied Mechanics and Engineering*, 18(2013) 955-964. <https://doi.org/10.2478/ijame-2013-0059>.
- [105] P. G. Siddheshwar, A. Chan, U. S. Mahabaleswar, Suction-induced magnetohydrodynamics of a viscoelastic fluid over a stretching surface within a porous medium, *The IMA Journal of Applied Mathematics*, 79(2014) 445-458. <https://doi.org/10.1093/imamat/hxs074>.
- [106] R. C. Chaudhary, A. K. Jha, Effects of chemical reactions on MHD Micropolar fluid flow past a vertical plate in slip-flow regime, *Applied mathematics and Mechanics*, 29(2008) 1179-1194. <https://doi.org/10.1007/s10483-008-0907-x>.
- [107] R. J. P. Gowda, R. N. Kumar, A. M. Jyothi, B. C. Prasannakumara, I. E. Sarris, Impact of Binary Chemical Reaction and Activation Energy on Heat and Mass Transfer of Marangoni Driven Boundary Layer Flow of a Non-Newtonian Nanofluid, *Processes*, 9(2021) 702. <https://doi.org/10.3390/pr9040702>.
- [108] R. Mehta, H. R. Kataria, Brownian motion and thermophoresis effects on MHD flow of viscoelastic fluid over stretching/shrinking sheet in the presence of thermal radiation and chemical reaction, *Heat Transfer*, 51(2022) 274-295. <https://doi.org/10.1002/htj.22307>.

- [109] R. Saravana, R. Hemadri Reddy, K. V. Narasimha Murthy, O. D. Makinde, Thermal radiation and diffusion effects in MHD Williamson and Casson fluid flows past a slendering stretching surface, *Heat Transfer*, 51(2022) 3187-3200. <https://doi.org/10.1002/htj.22443>.
- [110] R. V. Williamson, The flow of pseudoplastic materials, *Industrial & Engineering Chemistry*, 21(1929), 1108-1111. <https://doi.org/10.1021/ie50239a035>.
- [111] S. Abbasbandy, Homotopy analysis method for heat radiation equations. *International Communications in Heat and Mass Transfer*, 34(2007) 380–387. <https://doi.org/10.1016/j.icheatmasstransfer.2006.12.001>.
- [112] S. K. Adegbie, O. K. Koriko, I. L. Animasaun, Melting heat transfer effects on stagnetion point flow of micropolar fluid with variable dynamic viscosity and thermal conductivity at constant vortex viscosity, *Journal of the Nigerian Mathematical society*, 35(2016) 34-47. <http://dx.doi.org/10.1016/j.jnnms.2015.06.004>.
- [113] S. Afsana, M. M. Molla, P. Nag, L. K. Saha, S. Siddiqua, MHD Natural Convection and Entropy Generation of non-Newtonian Ferrofluid in a Wavy Enclosure, *International Journal of Mechanical Sciences*, 198(2021) 106350. <https://doi.org/10.1016/j.ijmecsci.2021.106350>.
- [114] S. M. Arifuzzaman, M. S. Khan, M. F. U. Mehedi, B. M. J. Rana, S.F. Ahmed, Chemically reactive and naturally convective high speed MHD fluid flow through an oscillatory vertical porous plate with heat and radiation absorption effect, *Engineering Science and Technology, an International Journal*, 21(2018) 215-228. <https://doi.org/10.1016/j.jestch.2018.03.004>.
- [115] S. Das, R. N. Jana, O. D. Makinde, MHD boundary layer slip flow and heat transfer of nanofluid past a vertical stretching sheet with non-uniform heat generation/absorption, *International Journal of Nanoscience*, 13(2014), 1450019. <https://doi.org/10.1142/S0219581X14500197>.
- [116] S. Das, R. N. Jana, O. D. Makinde, Magnetohydrodynamic mixed convective slip flow over an inclined porous plate with viscous dissipation and Joule heating. *Alexandria Engineering Journal*, 54(2015) 251-261. <https://doi.org/10.1016/j.aej.2015.03.003>.
- [117] S. R. Elkoumy, E. I. Barakat, S. I. Abdelsalam, Hall and Transverse Magnetic Field Effects on Peristaltic Flow of a Maxwell Fluid through a Porous Medium,

Global Journal of Pure and Applied Mathematics, 9(2013) 187–203. https://buescholar.bue.edu.eg/basic_sci_eng/30.

- [118] S. Gupta, D. Kumar, J. Singh, Analytical study for MHD flow of Williamson nanofluid with the effects of variable thickness, nonlinear thermal radiation and improved Fourier's and Fick's Laws, SN Applied Sciences, 2(2020) 1-12. <https://doi.org/10.1007/s42452-020-1995-x>.
- [119] S. Jena, G. C. Dash, S. R. Mishra, Chemical reaction effect on MHD viscoelastic fluid flow over a vertical stretching sheet with heat source/sink, Ain Shams Engineering Journal, 9(2018) 1205-1213. <https://doi.org/10.1016/j.asej.2016.06.014>
- [120] S. Liao, Beyond Perturbation: Introduction to the Homotopy Analysis Method, Chapman and Hall/CRC Press, (2003). <http://doi.org/10.1201/9780203491164>.
- [121] S. Liao, Homotopy analysis method in nonlinear differential equations, Beijing: Higher education press, 2012.
- [122] S. R. Mishra, I. Khan, Q. M. Al-Mdallal, T. Asifa, Free convective micropolar fluid flow and heat transfer over a shrinking sheet with heat source, Case studies in thermal engineering, 11(2018) 113-119. <https://doi.org/10.1016/j.csite.2018.01.005>.
- [123] S. Nadeem, S. T. Hussain, C. Lee, Flow of a Williamson fluid over a stretching sheet, Brazilian journal of chemical engineering, 30(2013) 619-625. <https://doi.org/10.1590/S0104-66322013000300019>.
- [124] S. Nadeem, R. U. Haq, C. Lee, MHD boundary layer flow over an unsteady shrinking sheet: analytical and numerical approach, Journal of the Brazilian society of Mechanical sciences and Engineering, 37(2015) 1339-1346. <https://doi.org/10.1007/s40430-014-0261-9>.
- [125] S. R. Pradhan, S. Baag, S. R. Mishra, M. R. Acharya, Free convective MHD micropolar fluid flow with thermal radiation and radiation absorption: A numerical study, Heat Transfer—Asian Research, 48(2019) 2613-2628. <https://doi.org/10.1002/htj.21517>.
- [126] S. Rosseland, Astrophysik und atom-theoretische Grundlagen, Springer-Verlag; Berlin, 1931.

- [127] T. M. Ajayi, A. J. Omowaye, I. L. Animasaun, Effects of viscous dissipation and double stratification on MHD Casson fluid flow over a surface with variable thickness: boundary layer analysis, In International journal of engineering research in Africa, 28(2017) 73-89. <https://doi.org/10.4028/www.scientific.net/JERA.28.73>.
- [128] T. Abbas, S. Rehman, R. Shah, M. Idrees, M. Qayyum, Analysis of MHD Carreau fluid flow over a stretching permeable sheet with variable viscosity and thermal conductivity, Physica A-statistical Mechanics and Its Applications, 551(2020) 124225. <https://doi.org/10.1016/j.physa.2020.124225>.
- [129] T. Tayebi, A. S. Dogonchi, A. J. Chamkha, M. B. B. Hamida, S. El-Sapa, A. M. Galal, Micropolar nanofluid thermal free convection and entropy generation through an inclined I-shaped enclosure with two hot cylinders, Case Studies in Thermal Engineering, 31(2022) 101813. <https://doi.org/10.1016/j.csite.2022.101813>.
- [130] T. A. Yusuf, F. Mabood, B. C. Prasannakumara, I. E. Sarris, Magneto-bioconvection flow of Williamson nanofluid over an inclined plate with gyrotactic microorganisms and entropy generation, Fluids, 6(2021), 109. <https://doi.org/10.3390/fluids6030109>.
- [131] U. Ali, M. Y. Malik, A. A. Alderremy, S. Aly, K. U. Rehman, A generalized findings on thermal radiation and heat generation/absorption in nanofluid flow regime, Physica A: Statistical Mechanics and its Applications, 553(2020) 124026. <https://doi.org/10.1016/j.physa.2019.124026>.
- [132] U. Ghosh, Electro-magneto-hydrodynamics of non-linear viscoelastic fluids, Journal of Non-Newtonian Fluid Mechanics, 277(2020) 104234. <https://doi.org/10.1016/j.jnnfm.2020.104234>.
- [133] U. S. Mahabaleshwar, K. R. Nagaraju, M. A. Sheremet, P. N. Vinay Kumar, G. Lorenzini, Effect of mass transfer and MHD induced Navier's slip flow due to a non linear stretching sheet, Journal of Engineering Thermophysics, 28(2019) 578-590. <https://doi.org/10.1134/S1810232819040131>.
- [134] U. Nazir, S. Saleem, M. Nawaz, M. A. Sadiq, A. Alderremy, Study of transport phenomenon in Carreau fluid using Cattaneo-Christov heat flux model with temperature dependent diffusion coefficients, Physica A: Statistical Mechanics and its Applications, 554(2020) 123921. <https://doi.org/10.1016/j.physa.2019.123921>.

- [135] W. A. Khan, I. Pop, Boundary-layer flow of a nanofluid past a stretching sheet, International journal of heat and mass transfer, 53(2010) 2477-2483. <https://doi.org/10.1016/j.ijheatmasstransfer.2010.01.032>.
- [136] W. Wang, B. W. Li, P. L. Varghese, X. Y. Leng, X. Y. Tian, Numerical analysis of three-dimensional MHD natural convection flow in a short horizontal cylindrical annulus, International Communications in Heat and Mass Transfer, 98(2018) 273-285. <https://doi.org/10.1016/j.icheatmasstransfer.2018.09.009>.
- [137] W. Ibrahim, Magnetohydrodynamics (MHD) flow of a tangent hyperbolic fluid with nanoparticles past a stretching sheet with second order slip and convective boundary condition. Results in physics, 7(2017) 3723-3731. <https://doi.org/10.1016/j.rinp.2017.09.041>.
- [138] Y. S. Daniel, Z. A. Aziz, Z. Ismail, A. Bahar, Unsteady EMHD dual stratified flow of nanofluid with slips impacts, Alexandria Engineering Journal, 59(2020) 177-189. <https://doi.org/10.1016/j.aej.2019.12.020>.
- [139] Y. S. Daniel, Z. A. Aziz, Z. Ismail, F. Salah, Impact of thermal radiation on electrical MHD flow of nanofluid over nonlinear stretching sheet with variable thickness, Alexandria Engineering Journal, 57(2018) 2187-2197. <https://doi.org/10.1016/j.aej.2017.07.007>.
- [140] Y. S. Daniel, Z. A. Aziz, Z. Ismail, F. Salah, Double stratification effects on unsteady electrical MHD mixed convection flow of nanofluid with viscous dissipation and Joule heating, Journal of applied research and technology, 15(2017) 464-476. <https://doi.org/10.1016/j.jart.2017.05.007>.
- [141] Y. Lin, L. Zheng, B. Li, L. Ma, A new diffusion for laminar boundary layer flow of power law fluids past a flat surface with magnetic effect and suction or injection, International Journal of Heat and Mass Transfer, 90(2015) 1090-1097. <https://doi.org/10.1016/j.ijheatmasstransfer.2015.07.067>.
- [142] Y. D. Reddy, B. S. Goud, A. J. Chamkha, M. A. Kumar, Influence of radiation and viscous dissipation on MHD heat transfer Casson nanofluid flow along a nonlinear stretching surface with chemical reaction, Heat Transfer, 51(2022) 3495-3511. <https://doi.org/10.1002/htj.22460>.
- [143] Z. Li, M. Sheikholeslami, A. S. Mittal, A. Shafee, R. U. Haq, Nanofluid heat transfer in a porous duct in the presence of Lorentz forces using the lattice Boltzmann method, The European Physical Journal Plus, 134(2019) 1-10. <https://doi.org/10.1140/epjp/i2019-12406-8>.

- [144] Z. M. Yusof, S. K. Soid, A. S. Abd Aziz, S. A. Kechil, Radiation effect on unsteady MHD flow over a stretching surface, International Journal of Computer and Information Engineering, 6(2012) 1772-1775.
<https://doi.org/10.5281/zenodo.1062348>.