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RESEARCH INTEREST:

Fluid Mechanics, Analytical Methods, Differential Equations.

TEACHING EXPERIENCE: Working as Assistant Professor since 21-10-2023 till date in BIET DVG

EDUCATION

- Ph.D (Mathematics) from Davangere University, Davangere, 2023.
- M.Sc (Mathematics) from Davangere University, Davangere, 2018. with first class.
- B.Sc (Mathematics, Chemistry & Physics) from A.V.K college, Davangere, , 2016 with Distinction.

PUBLICATIONS

- A.B. Vishalakshi, U.S. Mahabaleshwar, L.M. Pérez, O Manca. Hiemenz stagnation point flow with computational modelling of variety of boundary conditions. Journal of Magnetism and Magnetic Materials, 575, (2023) #170747.
- A.B. Vishalakshi, R. Mahesh, U.S. Mahabaleshwar, A.K. Rao, L.M. Pérez, D. Laroze. MHD Hybrid Nanofluid Flow over a Stretching/Shrinking Sheet with Skin Friction: Effects of Radiation and Mass Transpiration, Magnetochemistry, 9, (2023), 118.
- A.B. Vishalakshi, U.S. Mahabaleshwar, M.H. Ahmadi, M. Sharifpur. An MHD Casson fluid flow past a porous stretching sheet with threshold Non-Fourier heat flux model. Alexandria Engineering Journal, 69, (2023), 727-737.
- A.B. Vishalakshi, U.S. Mahabaleshwar, D. Laroze, D. Zeidan. A study of mixed convective ternary hybrid nanofluid flow over a stretching sheet with radiation and transpiration, Special Topics & Reviews in Porous Media: An International Journal, 14, (2023).
- J. Singh, A.B. Vishalakshi, U.S. Mahabaleshwar, G. Bognar. MHD Casson fluid flow with Navier's and second order slip due to a perforated stretching or shrinking sheet, Plos one, 17, (2022), 11.
- A.B. Vishalakshi, U.S. Mahabaleshwar, M. Hatami. MHD Casson carbon nanotube flow with mass and heat transfer under thermosolutal Marangoni convection in a porous medium: analytical solution. Scientific Reports, 12, (2022), 16071.

- U.S. Mahabaleshwar, A.B. Vishalakshi, G.V. Bognar, S.M. Mallikarjunaiah. Effect of Thermal Radiation on the Flow of a Boussinesq Couple Stress Nanofluid Over a Porous Nonlinear Stretching Sheet. *International Journal of Applied and Computational Mathematics*, 8, (2022), 4.
- U.S. Mahabaleshwar, G. Bognár, D. Baleanu, A.B. Vishalakshi. Two-Dimensional Nanofluid Due to an Accelerated Plate with Viscosity Ratio, *International Journal of Applied and Computational Mathematics*, 8, (2022), 111.
- U.S. Mahabaleshwar, E.H. Aly, A.B. Vishalakshi. MHD and thermal radiation flow of graphene casson nanofluid stretching/shrinking sheet, *International Journal of Applied and Computational Mathematics*, 8, (2022), 113.
- A.B. Vishalakshi, T. Maranna, U.S. Mahabaleshwar, D. Laroze. An effect of MHD on non-Newtonian fluid flow over a porous stretching/shrinking sheet with heat transfer, *Applied Sciences*, 12, (2022), 4937.
- U.S. Mahabaleshwar, A.B. Vishalakshi, M. Hatami. MHD micropolar fluid flow over a stretching/shrinking sheet with dissipation of energy and stress work considering mass transpiration and thermal radiation, *International Communications in Heat and Mass Transfer*, 133, (2022), 105966.
- A.B. Vishalakshi, U.S. Mahabaleshwar, Y. Sheikhnejad. Impact of MHD and mass transpiration on Rivlin–Erickson liquid flow over a stretching sheet in a porous media with thermal communication, *Transport in Porous Media*, 142, (2022), 1-2.
- U.S. Mahabaleshwar, A.B. Vishalakshi, M.N. Azese. The role of Brinkmann ratio on non-Newtonian fluid flow due to a porous shrinking/stretching sheet with heat transfer. *European Journal of Mechanics-B/Fluids*. 92, (2022), 153-165.
- A.B. Vishalakshi, U.S. Mahabaleshwar, G. Lorenzini. An Unsteady Hiemenz Stagnation Point Flow of MHD Casson Nanofluid Due to a Superlinear Stretching/Shrinking Sheet with Heat Transfer. *J. Adv. Res. Fluid. Mech. Therm. Sci.* 95, (2022), 1-19.
- A.B. Vishalakshi, U.S. Mahabaleshwar, I.E. Sarris. An MHD fluid flow over a porous stretching/shrinking sheet with slips and mass transpiration. *Micromachines*, 13, (2022), 116.
- U.S. Mahabaleshwar, A.B. Vishalakshi, H.I. Andersson. Hybrid nanofluid flow past a stretching/shrinking sheet with thermal radiation and mass transpiration. *Chinese Journal of Physics*, 75, (2022), 152-168.

Accepted book chapters:

- A. B. Vishalakshi, U. S. Mahabaleshwar, S. Bhattacharayya. Impact of Navier’s Slips on MHD Nano Boundary Layer Past a Stretching Sheet with Mass Transpiration and Radiation, *Hand book of research on heat transfer*, Nova publishers.

SHORT TERM COURSES/WORSHOPS

Attended/papers presented

- Presented a paper entitled **“An impact of multiple slips on hybrid nanofluid flow through a porous media with heat transfer”** in two days programme on **“13th International conference on computational Heat Mass and Momentum Transfer”** at ICCHMT 2021- in Virtual Congress, during May 18-19, 2021.
- Presented a paper entitled **“Navier’s slip and heat transfer due to a stretching/shrinking sheet: Analytical study”** in three days programme on **“International Conference on Materials and Energy ICOME 2021”** at ICOME 21 Chairs Prof. M. El Ganaoui Prof. R Bennacer, during June 9-11, 2021.
- Presented a paper entitled **“Study of mixed convective nanofluid flow due to porous stretching/shrinking sheet with heat transfer”** in three days programme on **“48th National conference”** at BITS Pilani, Pilani Campus, Rajasthan, India., during December 27-29, 2021.
- Presented a paper entitled **“A Study of Ternary Hybrid Nanofluid Flow due to Porous Stretching/Shrinking Sheet with Mass Transpiration and Thermal Radiation”** in three days programme on **“48th National conference”** at International Conference on Advances in Transport Phenomena (ICATP 2022) - A Virtual Meet., during July 16-18, 2022.
- Presented a paper entitled **“System of highly non-linear partial differential equations mapped to highly nonlinear ordinary differential equations”** in three days programme on **“International Conference on Recent Developments in Mathematics”**, during August 24-26, 2022.
- Presented a paper entitled **“An MHD Casson carbon nanotubes flow with mass and heat transfer under thermosolutal Marangoni convection in a porous medium: Analytical solution”** in three days programme on **“Manipal Institute of technology”**, October 4 -6, 2022.

SUBJECTS TAUGHT

Engineering Mathematics I, Engineering Mathematics III.

Ph.D. Thesis: “Mathematical and computational modeling of MHD Newtonian/non-Newtonian fluid flow due to porous shrinking/stretching sheet with heat transfer”

Residential Address

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