

Dr. Punith Gowda R. J.

Assistant Professor

Department of Mathematics

Bapuji Institute of Engineering and Technology,

Davangere -577004

Mob: +918105443432

Email: rjpunithgowda@gmail.com

RESEARCH INTEREST :

Modelling and Computational Mathematics, Boundary layer theory, Numerical analysis, Newtonian/Non-Newtonian fluids, Two phase fluid flow, Nanofluid Mechanics.

TEACHING EXPERIENCE : Having 4 years of teaching experience

Worked as:

- Lecturer in Mathematics Department of Mathematics, Jain Group of Institution, Davangere from April,2017 to January,2020
- Lecturer in Department of Mathematics, Government Science College(Autonomous) Bangalore from August,2016 to April,2017.

EDUCATION

- Ph.D., in Mathematics from Davangere University, Davangere (2019-2023).
- M.Sc (Mathematics) from Kuvempu University, Shankaraghata, Shimoga, Karnataka, in the year 2014 with first class.
- B.Ed (Physics and Mathematics) from Kuvempu University, D.K Shivakumar B.Ed College Bhadravathi, 2015 with Distinction.
- B.Sc (Physics, Mathematics and Computer science) from Kuvempu University, DVS Arts & Science College Shimoga, 2012 with First class.

PUBLICATIONS

- [1] M. Gnaneswara Reddy, **R.J. Punith Gowda**, R. Naveen Kumar, B. Prasannakumara, and K. Ganesh Kumar, ‘Analysis of modified Fourier law and melting heat transfer in a flow involving carbon nanotubes’, Proc. Inst. Mech. Eng. Part E J. Process Mech. Eng., p. 09544089211001353, Mar. 2021, doi: 10.1177/09544089211001353.

- [2] R. Naveen Kumar, H. B. Mallikarjuna, N. Tegalappa, **R. J. Punith Gowda**, and D. U. Sarwe, ‘Carbon nanotubes suspended dusty nanofluid flow over stretching porous rotating disk with non-uniform heat source/sink’, Int. J. Comput. Methods Eng. Sci. Mech., vol. 0, no. 0, pp. 1–10, May 2021, doi: 10.1080/15502287.2021.1920645.
- [3] P.-Y. Xiong, M. I. Khan, **R. J. Punith Gowda**, R. Naveen Kumar, B. C. Prasannakumara, and Y.-M. Chu, ‘Comparative analysis of (Zinc ferrite, Nickel Zinc ferrite) hybrid nanofluids slip flow with entropy generation’, Mod. Phys. Lett. B, p. 2150342, May 2021, doi: 10.1142/S0217984921503425.
- [4] H. B. Mallikarjuna, T. Nirmala, **R. J. Punith Gowda**, R. Manghat, and R. S. Varun Kumar, ‘Two-dimensional Darcy–Forchheimer flow of a dusty hybrid nanofluid over a stretching sheet with viscous dissipation’, Heat Transf., vol. 50, no. 4, pp. 3934–3947, 2021, doi: <https://doi.org/10.1002/htj.22058>.
- [5] R. Naveen Kumar, **R.J. Punith Gowda**, G. Prasanna, B. Prasannakumara, K. S. Nisar, and W. Jamshed, ‘Comprehensive study of thermophoretic diffusion deposition velocity effect on heat and mass transfer of ferromagnetic fluid flow along a stretching cylinder’, Proc. Inst. Mech. Eng. Part E J. Process Mech. Eng., p. 09544089211005291, Mar. 2021, doi: 10.1177/09544089211005291.
- [6] **R. J. Punith Gowda**, H. M. Baskonus, R. Naveen Kumar, B. C. Prasannakumara, and D. G. Prakasha, ‘Computational Investigation of Stefan Blowing Effect on Flow of Second-Grade Fluid Over a Curved Stretching Sheet’, Int. J. Appl. Comput. Math., vol. 7, no. 3, p. 109, May 2021, doi: 10.1007/s40819-021-01041-2.
- [7] **R. J. Punith Gowda**, Fahad S Al-Mubaddel, R. Naveen Kumar, B.C Prasannakumara, Alibek Issakhov, Mohammad Rahimi-Gorji, Yusuf A Al-Turki, ‘Computational modelling of nanofluid flow over a curved stretching sheet using Koo–Kleinstreuer and Li (KKL) correlation and modified Fourier heat flux model’, Chaos Solitons Fractals, vol. 145, p. 110774, Apr. 2021, doi: 10.1016/j.chaos.2021.110774.
- [8] A. Hamid, Y.-M. Chu, M. I. Khan, R. Naveen Kumar, **R. J. Punith Gowda**, and B. C. Prasannakumara, ‘Critical values in axisymmetric flow of magneto-Cross nanomaterial towards a radially shrinking disk’, Int. J. Mod. Phys. B, vol. 35, no. 07, p. 2150105, Mar. 2021, doi: 10.1142/S0217979221501058.
- [9] P.-Y. Xiong, Aamir Hamid, Yu-Ming Chu, M Ijaz Khan, **R.J Punith Gowda**, R Naveen Kumar, BC Prasannakumara, Sumaira Qayyum, ‘Dynamics of multiple solutions of Darcy–Forchheimer saturated flow of Cross nanofluid by a vertical thin needle point’, Eur. Phys. J. Plus, vol. 136, no. 3, p. 315, Mar. 2021, doi: 10.1140/epjp/s13360-021-01294-2.
- [10] **Punith Gowda Ramanahalli Jayadevamurthy**, Naveen kumar Rangaswamy, B. C. Prasannakumara, and K. S. Nisar, ‘Emphasis on unsteady dynamics of bioconvective hybrid

nanofluid flow over an upward–downward moving rotating disk’, Numer. Methods Partial Differ. Equ., vol. n/a, no. n/a, doi: <https://doi.org/10.1002/num.22680>.

- [11] **R. J. Punith Gowda**, R. Naveen Kumar, B. C. Prasannakumara, B. Nagaraja, and B. J. Gireesha, ‘Exploring magnetic dipole contribution on ferromagnetic nanofluid flow over a stretching sheet: An application of Stefan blowing’, J. Mol. Liq., vol. 335, p. 116215, Aug. 2021, doi: 10.1016/j.molliq.2021.116215.
- [12] M. Radhika, **R. J. Punith Gowda**, R. Naveenkumar, Siddabasappa, and B. C. Prasannakumara, ‘Heat transfer in dusty fluid with suspended hybrid nanoparticles over a melting surface’, Heat Transf., vol. 50, no. 3, pp. 2150–2167, 2021, doi: <https://doi.org/10.1002/htj.21972>.
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- [15] **R. J. Punith Gowda**, R. Naveen Kumar, A. M. Jyothi, B. C. Prasannakumara, and 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, vol. 9, no. 4, Art. no. 4, Apr. 2021, doi: 10.3390/pr9040702.
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- [17] R. Naveen Kumar, A.M Jyothi, Hesham Alhumade, **R.J Punith Gowda**, Mohammad Mahtab Alam, Irfan Ahmad, M.R Gorji, B.C Prasannakumara ‘Impact of magnetic dipole on thermophoretic particle deposition in the flow of Maxwell fluid over a stretching sheet’, J. Mol. Liq., vol. 334, p. 116494, Jul. 2021, doi: 10.1016/j.molliq.2021.116494.
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deposition in time-dependent flow of hybrid nanofluid over rotating and vertically upward/downward moving disk', *Surf. Interfaces*, vol. 22, p. 100864, Feb. 2021, doi: 10.1016/j.surfin.2020.100864.

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10.1142/S0129183122500139.

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Conference/ Workshops/Trainings attended:

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|-------|--|--|-----------------------|--|---|
| 1. | Computational modeling of convective chemically reactive nanofluid flow over a curved stretching sheet: An application of Stefan blowing | National Seminar on "Modeling and Simulation (The world of Applied Mathematics)" (MS-2021) | July 3, 2021 | GOVT. PT. SHYAMACHARAN SHUKLA COLLEGE DHARSIWA RAIPUR, (C.G.) | National |
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Residential Address

Dr. Punith Gowda R. J.
S/O Jayadevamurthy B,
Ramanahalli, Bisalehalli Post,
Kadur Tq,
Chickmagalur Dist.
Pin: 577548.