GMU - Faculty & Staff Profile

Contact

Email
Prasannabmr.mat@gmu.ac.in

Phone
9448893047

Websites

LinkedIn,
Google Scholar-
https://scholar.google.com/citations?user=MUFbrK0AAAAJ&hl=en&authuser=2
, Research Gate,
SCOPUS,
PUBLONS ID

Dr. Prasanna B M R

Professor and HOD in School of Mathematical and Physical Sciences

Faculty
Faculty of Basic and Applied Sciences (FBAS)

School / Program
School of Mathematical and Physical Sciences

Faculty Introduction

Dr. Prasanna B. M. R. is a Professor and Head of the Department at the School of Mathematical and Physical Sciences, GMU. He specializes in **Magneto Hydrodynamics (MHD), natural convection, and heat transfer in porous media**. With over **36 years of teaching and research experience**, he has contributed extensively to national and international journals and conferences. He has guided several Ph.D. scholars and actively participates in academic committees such as BOS and BOE. His research focuses on **numerical modeling of convection, magnetoconvection, and fluid flow in complex geometries**. Dr. Prasanna has also organized and chaired workshops and conferences in applied mathematics and computational sciences.

Qualifications

Ph.D. Magneto hydrodynamic-(MHD)
Ph.D. from Bangalore University, Bangalore., 2002

M.Sc. from Gulbarga University, Gulbarga**, 1988**

B.Sc. from University of Mysore, Mysore., 1985
P.G. Diploma In Computer Science and Applications from Bangalore University, Bangalore, 1987.

Experience

Teaching

- 36 Years
- Professor and Head, Department of Mathematics, G M University, Davanagere, 01-04-2025.
- Professor, Department of Mathematics, Siddaganga Institute of Technology, Tumkur from 2007 to 2025.
- Assistant Professor, Department of Mathematics, Siddaganga Institute of Technology, Tumkur from 2003 to 2007.
- Sr. Grade Lecture, Department of Mathematics, Siddaganga Institute of Technology, Tumkur from 2000 to 2003.

- Lecturer, Department of Mathematics, Siddaganga Institute of Technology, Tumkur from 1992 to 2000.
- Lecturer, Department of Mathematics, Kalpataru Institute of Technology, Tiptur from 1989 to 1992.

Industry

- 3 Years
- NGF Bangalore.

Research

- Magneto Hydrodynamics (MHD)

Training Program Attended

- FDP on "Bibliometric Analysis, Systematic Literature Review and Meta Analysis" organized by Amity Business School, Amity University Haryana, Gurugram from May 08-12, 2023.
- Workshop on 'Managing Research Literature using Mendeley' organized by Amity University Madhya Pradesh and Elsevier on 5th Feb, 2022.

Research Interest

- Magneto Hydrodynamics (MHD)

Awards & Achievements

- Session Chaired in National and International Conferences-15
- BOS and BOE in Reputed Universities

Publication / Patents

- **Journals**
- 1.Numerical study of natural convection in a vertical cylindrical annulus using a nonDarcy equation, J. Porous Med., 5 (2) (2002), 87–102.
- 2. Numerical Study of Double-diffusive Radial Magneto-Convection in Cylindrical Annuli, J. Intelligent system research, 1(2) (2007). 3.Numerical study of natural convection in vertical porous annuli in the presence of magnetic field, Int. J. of Appl. Math and Mech., 6(2) (2010), 1-18.
- 4. Natural Convection in a Vertical Annulus with Discrete Heat Source and Sinks, International Journal of Research and Reviews in Applicable Mathematics & Computer Science, 2(2) (2012), 80-101.
- 5. Natural convection in a vertical annulus with a baffle on the inner wall, International Journal of Mathematics and Computational Methods in Science and Technology 2 (5) (2012), 1-9.
- 6. Double diffusive convection in an inclined parallelogrammic porous enclosure, Procedia Engineering, 127(2015), 1346-1353.
- 7. Influence of size and location of a thin baffle on natural convection heat transfer in a vertical annular enclosure, Journal of Applied Fluid Mechanics, 9 (2016), 2671-2684.
- 8. Effect of Rayleigh number and buoyancy ratio on heat and mass transfer in an inclined parallelogrammic porous enclosure in the presence

of magnetic field and heat source, Int. J. Sci. Engg. Res.,Vol. 8(5) (2017), 40-43.

- 9. Influence of a thin baffle and magnetic field on natural convection in a vertical annular enclosure, Materials Today: Proceedings (Accepted for publication).
- 10. Numerical study of double-diffusive convection in a vertical annular enclosure with a baffle, IOP Journal of Physics: Conference series (JPCS) (Accepted for publication).
- 11. Natural convection in an inclined parallelogrammic porous enclosure under the effect of magnetic field , IOP Journal of Physics: Conference Series. (Accepted for Publication).
- 12. Numerical simulation of double diffusive magnetoconvection in an inclined parallelogrammic porous enclosure with an internal heat source, Materials Today: Proceedings. (Accepted for Publication).
- 13. Natural convection in an inclined parallelogrammic porous enclosure, Accepted for Publication in Springer Book Chapter entitled "Flow and Transport in Subsurface Environment", Springer Transactions in Civil and Environmental Engineering.
- 14. Numericalstudy of double- diffusive natural convection in a vertical annular cavity with heated plate, Alexandria Engineering Journal (Submitted).
- 15. B. M. R. Prasanna, "Numerical study of natural convection in vertical cylindrical annulus with internal heat generation," in *Proc. 2nd Int. Conf. Computational Sciences — Modelling, Computing*, 2023.
- 16. M. Sankar, S. Kemparaju, S. Kiran, and B. M. R. Prasanna, "Impacts of thermal source and sink on magnetoconvection in an annular geometry: A numerical analysis," *Materials Today: Proceedings*, vol. 100, pp. 167–173, 2024.
- **Conferences**
- 1. "Numerical study of double-diffusive convection in a vertical annular enclosure with a baffle", International Conference on Applications and Design in Mechanical Engineering, held on 21-22 Aug 2017, Jabatan Bendahari University of Malaysia Perlis, Malaysia.
- 2. "Natural convection in an inclined parallelogrammic porous enclosure under the effect of magnetic field International Conference on Applications and Design in Mechanical Engineering, , Jabatan Bendahari University of Malaysia Perlis, Malaysia.
- 3. "Natural Convection in a Vertical Annulus with Discrete Heat Source and Sinks", The 32nd Annual Conference of Ramanujan Mathematical Society, June 23-25, 2017, Visvesvaraya Technological University, Belagavi.
- 4. "Double-Diffusive Magnetoconvection in Cylindrical Annuli", Proceedings of the International Conference in Mathematics and Applications (ICMA-MU-2017), pp. 411-425, August 15-17, 2007, Bangkok, Thailand.
- 5."Numerical Study of non-linear Natural convection in porous annuli with radial magnetic field" Proceedings of Internal conference on Advances in Mechanical Engineering – 2006 (AME 2006) Dec, 2006, Baba Banda Singh Bahadur Engg. College, Punjab.
- 6. "Numerical Study of Natural convection in vertical concentric cylindrical porous annuli with internal heat generation" Proceedings of Internal conference on Advances in Mechanical Engineering – 2006

(AME 2006) Dec, 2006, Baba Banda Singh Bahadur Engg. College, Punjab. 7. Numerical Study of Natural Convection in a Vertical Concentric Cylindrical Annulus with internal heat generation" First International conference on Frontier technologies need for the industry , Business And Education, Adhiyamaan College of Engineering, Hosure, Sep 2006.

- 8. Numerical Study of Non – Linear Natural Convection in porous double annulus with constant field" First International conference on Frontier technologies need for the industry , Business and Education, Adhiyamaan College of Engineering, Hosure, Sep 2006.
- 9. "ADI Numerical Modelling Methodology for Convection in Double Annuli fluid Saturated porous region using Non Darcy Equation" The 10th Annual Conference of CFD Society of Canada , Windsor, 527-531, (2002). 10."Buoyancy Driven Convection in a tiled Rectangular porous Cavity" Proceedings of 15th National and 4th ISHMT/ASME, Heat and Mass Transfer Conference. 557- 562,(2000).
- 11. "Natural Convection in Rectangular Porous Cavity" Proceedings of Seventh Asian Congress of Fluid Mechanics, Vol. 2, 561-564, Chennai, (1997).

Professional Membership

- International Association of Engineers
- Member ISTE
- Life Member in Ramanujan Mathematical Society (RMS)
- Editorial Board Member in International Journal of Engineering Technology Research & Management

Awards & Recognitions

- Best Faculty
- Best Research Scholar

Administrative Responsibilities

- Head of the Department

Workshops / FDPs / Seminars Attended

- 25

Workshops / FDPs / Seminars Organized

- 1 "Recent Trends in Applied Mathematics", on 7th and 8th June at SIT, Tumkur, 2013.
- 2. "Webinar on Distinguishable Sets in Graph Theory", 15thJune, SIT, 2013.

Projects Guided

- **Ph.D.**
  - Dr. H.S. Shivashankar Heat Transfer Problems in Porous and Non Porous Vertical Annuli 2009.
  - Dr. N.S. Venkatesha Gupta Natural Convection Problems in Vertical Concentric Cylindrical Annuli with Internal Heat Generation 2010 .

- Dr. Jagadeesh S Numerical study of natural convection and mass transfer in porous and non porous parallelogram enclosures 2017.
- Dr. Gavirangaiah K Switching Invariant Signed Graphs 2017 Pushpa B.V Numerical modeling of Natural Convection in a Cylindrical Annular Cavity with Thin heated plate. Awarded
- Dr. Gavirangaiah K — **Switching Invariant Signed Graphs** — 2017 —Awarded.
- Dr. Pushpa B. V — **Numerical Modeling of Natural Convection in a Cylindrical Annular Cavity with Thin Heated Plate** — 2018 — *Awarded.*

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11-**10-2025**