Dr Meghana J.

Assitant Professor
Department of Mathematics
B.M.S College of Engineering, Bengaluru
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Education

2018 – 2022 **Ph.D in Mathematics** (Fluid Mechanics),
CHRIST (Deemed to be University), Bangalore.

2016 – 2018 **M.Sc. in Mathematics**
First Class with Distinction, (77.53%)
CHRIST (Deemed to be University), Bangalore.

2013 – 2016 **B.Sc. in Physics, Chemistry and Mathematics**
First Class with Distinction, (86.11%)
Christ University, Bangalore.

2011 – 2013 **PUC** in PCMB
Distinction, (93.17%)
Christ Junior College, Bangalore.

2010-2011 **SSLC**
Distinction, (97.28%)
Anekal Public High School, Anekal.

Experience

Dec 2022-Present **Assistant Professor**
Department of Mathematics
B.M.S. College of Engineering, Bangalore.

Aug 2022-Dec 2022 **Assistant Professor**
Department of Mathematics
Mount Carmel College, Bangalore.

Dec 2021-July 2022 **Assistant Professor**
Post Graduate Department of Mathematics
BMS College for Women, Bangalore.

Jun 2019- Nov 2021 **Teaching Assistant**
Department of Mathematics
CHRIST (Deemed to be University), Bangalore.

Awards

2022 **Best Paper Presentation Award**
International Conference on Emerging Trends in Applied Mathematics (ICETAM).

2013-2018 **Inspire Scholarship**
Department of Science and Technology, Government of India.

Publications

- Rayleigh-Bénard convection in a Boussinesq-Stokes ferromagnetic fluid under sinusoidal and non-sinusoidal internal heat modulation, **Heat Transfer, Wiley**, vol. 51, pp. 5030-5052, 2022 (co-authored with S. Pranesh).
- Effects of sinusoidal and non-sinusoidal temperature modulation in a Triple Diffusive Convection, **TWMS Journal of Applied and Engineering Mathematics**, vol. 11, no. 4, pp. 1207–1220, 2021 (co-authored with S. Pranesh and Sameena Tarannum).
- Individual effects of four types of Rotation modulation on Rayleigh-Bénard Convection in a Ferromagnetic fluid with couple stress, **Heat Transfer, Wiley**, vol. 50, no. 7, pp. 6795–6815, 2021 (co-authored with S. Pranesh).
- Two Component Convection in Micropolar Fluid under Time Dependent Boundary Concentration, **Mathematical Fluid Mechanics**, pp. 163–200, De Gruyter, 2021 (co-authored with S. Pranesh).
- Individual effects of sinusoidal and non-sinusoidal gravity modulation on Rayleigh-Bénard convection in a ferromagnetic liquid and in a nanoliquid with couple stress, **The European Physical Journal Special Topics**, vol. 230, no. 5, pp. 1415–1425, 2021 (co-authored with S. Pranesh, and P. G. Siddheshwar).
- Inphase and Outphase Concentration Modulation on the Onset of Magneto-Convection and Mass Transfer in Weak Electrically Conducting Micropolar Fluids, **AIP Conference Proceedings-2080**, p. 030012, 2019 (co-authored with S. Pranesh and Ansa Mathew).

Internships

Summer Research Fellowship Programme

April–May 2017 — **Christ University**, Bangalore.
Project title: Numerical Methods of Partial Differential Equations using Matlab.

April–June 2016 — **Karnatak University**, Dharwad.
Project title:Study of second order differential equations.

April–June 2015 — **Space Application Center (ISRO)**, Ahmedabad.
Project title: Study of 1/f Noise in MCT Photoconductive Detectors.

Projects

M.Sc. Project — **CHRIST (Deemed to be University),** Bangalore.
Major Project: Linear and Weakly Nonlinear Analysis of Concentration Modulation on the onset of Convection.
Minor Project: Effects of Suction-injection-combination on the onset of Rayleigh-benard Magnetoconvection in a Micropolar Fluid.

B.Sc. Project — **Christ University,** Bangalore.
Minor Project: Estimation of Ascorbic acid in Citrus Fruits during various stages of Ripening

Conference Presentations

- Presented a paper entitled "Effect of suction, injection and combination on Rayleigh-Bénard magnetoconvection in a couple-stress fluid " in an International Conference on Modelling, Simulation and Optimization of Energy Systems (MSOES 2023), during June 17-18, 2023 at Canadian University Dubai.
- Presented a paper entitled "Individual effect of sinusoidal/non-sinusoidal concentration modulation on ferroconvection in Boussinesq–Stokes suspensions " in an International Conference on Recent Development in Mathematics (ICRDM-2022) during August 24-26, 2022 at Canadian University Dubai, Dubai.
- Presented a paper entitled "Ferroconvection and electroconvection in Boussinesq–Stokes suspensions under sinusoidal/ non-sinusoidal temperature modulation" in an International Conference on Emerging Trends in Applied Mathematics (ICETAM-2022) during April 21-22, 2022 at MCC, Bangalore.
- Presented a paper entitled "Ferroconvection and electroconvection in Boussinesq–Stokes suspensions under sinusoidal/non-sinusoidal internal heat modulation " in the 66^{th} Congress of Indian Society of Theoretical and Applied Mechanics (ISTAM) (Virtual International Conference) during 3-5 December 2021 at VIT-AP University, Amaravati.
- Presented a paper entitled "Linear and Non-Linear Analysis of Internal Heat Modulation on Rayleigh-Bénard Convection in Ferromagnetic Liquids with Couple Stress " in 86^{th} Annual Conference of the Indian Mathematical Society (An International Meet) (IMS2020) during December 17-20, 2020 at VIT, Vellore.
- Presented a paper entitled "Effect of Synchronous and Asynchronous time-periodic Temperature on the onset of Rayleigh-Bénard Convection in a Ferromagnetic fluid with Couple stress"in 5^{th} International Conference on Applications of Fluid Dynamics (An Online Conference) (ICAFD-2020) during 13-15 December 2020 at VIT-AP University, India.
- Presented a paper entitled "Effect of different wave types of time periodic Coriolis force on the onset of Rayleigh-Bénard convection in a ferromagnetic fluid with couple stress" in the International Conference on Emerging Trends in Fluid Mechanics and its Applications (ICETFMA-2020) during 27-28 February 2020 at CHRIST (Deemed to be University), Bangalore.
- Presented a paper entitled "Effect of Sinusoidal and Non-Sinusoidal Gravity Modulation on Rayleigh-Bénard Ferroconvection in Couple Stress Fluid" in the 64^{th} Congress of Indian Society of Theoretical and Applied Mechanics (ISTAM) during 9-12 December 2019 at IIT, Bhubaneswar, Odisha.
- Presented a poster entitled "Double Diffusive Convection in a Micropolar Fluid under Time Dependent Concentration"in National Symposium on Mathematics and its Applications (NSMA)" on 27 April 2019 at Bangalore University.
- Presented a paper entitled "Two Component Convection in Micropolar Fluid under Time Dependent Boundary Concentration"in the International Conference on Emerging Trends in Computational Fluid Dynamics (ICETCFD-2019) during 27-28 February 2019 at CHRIST (Deemed to be University), Bangalore.
- Presented a paper entitled "Linear and Non-linear Analysis of Concentration Modulation in a Micropolar Fluid"in the 63^{rd} Congress of Indian Society of Theoretical and Applied Mechanics (ISTAM) during 20-23 December 2018 at Dayanad Sagar University, Kudlu Gate, Bangalore.
- Presented a paper titled "Effect of Heat and Mass Transfer in Double Diffusive Convection in a Fluid with Suspended Particle under Time Dependent Concentration "in *SCINFOART-2K18*, National Conference on Humanities, Science and Technology held on 13 October 2018 by Department of Computer Science, Arts and Science in Christ College of Science and Management, Alambady, Malur.

Workshops Attended

- Participated in two day international workshop on "Instabilities in Newtonian Fluid Flows" held on 6-7 March 2024, organised by the Department of Mathematics, CHRIST (Deemed to be University), Bengaluru.
- Participated in the Five Days Workshop on “Computational Mathematics using MATLAB/SCILAB and PYTHON” during 12-16 June 2023 organised by Department of Mathematics, CMR Institute of Technology, Bengaluru.
- Participated in a day workshop on “Research Methodology and Publication Ethics” held on 18 April 2023 organised by Department of Physics, Chemistry and Mathematics, B.M.S. College of Engineering, Bengaluru.
- Participated in the Workshop on “Technical Document Preparation using Latex” during 8-13 June 2020 organised by Department of Mathematics, Ghandhy Government Engineering College, Surath.
- Participated in the Author Workshop on “How to write and publish scientific articles and manuscripts” on 30 March 2020 organized by Springer Nature and CHRIST (Deemed to be University), Bengaluru.
- Participated in the Latex training program and Commerce in January 2020 organized by Sankara College of Science.
- Participated in the Workshop cum Winter School on “Methods for Nonlinear Dynamical Systems and Chaos (WCWS-2019)” during 23-27 December 2019 organised by Department of Mathematics, National Institute of Technology, Uttarakhand at MNIT Jaipur.
- Participated in two day workshop on Ansys fluent on 30 November and 1 December 2018 at CHRIST (Deemed to be University), Bangalore.
- Participated in two day workshop on Tikz on 5 November and 7 November 2018 at CHRIST (Deemed to be University), Bangalore.
- Participated in two day workshop on “Advanced Topics in Mathematics” during 13-14 November 2017 organized by Department of Mathematics, Christ University, Bengaluru .
- Participated in the Science Academies Lecture Workshop on “Ordinary Differential Equations: An overview of its applications and various methods of solutions” during 30-31 January 2014 at Christ University, Bangalore.

FDP’s Attended

- Participated in one week faculty development program on “Mathematical Foundation for Data Science" during 15-20 May 2023 organized by Department of Mathematics, B.M.S. College of Engineering, Bengaluru.
- Participated in the five days online faculty development program on “Scientific Application packages for state-of-the-art technical computing’ during 14-18 March November 2022 organized by Department of Mathematics, School of Engineering, Presidency University, Bengaluru.
- Participated in the online webinar five day faculty development program on “Recent Trends in Fluid Dynamics’ during 17-21 November 2020 conducted by Sapthagiri College of Engineering, Bangalore.

Skills

Languages	Strong reading, writing and speaking competencies in English and Kannada.
Softwares	Matlab, Mathematica, Python, Scilab, Origin, WxMaxima and LaTeX.

Webinars Attended

- Participated in IP Awareness/Training program under NATIONAL INTELLECTUAL PROPERTY AWARENESS MISSION on 3 May 2023 Intellectual Property Office, India.
- Participated in the online Lecture Series on Nonlinear Dynamics and Applications during 13-16 February 2023 organized by the Department of Mathematics, Indian Institute of Technology, Indore.
- Participated in the online symposium on "Mathematical Sciences and their applications: MSATA-2022" held on 28 and 29 January 2022 organized by Department of Applied Mathematics, Yogi Vemana University, Kadapa.
- Participated in the online webinar "Fourier Series, Fourier Transforms & Wavelets" held on 10 September 2020, organized by the Department of Mathematics, Dr. Ambedkar Institute of Technology, Bengaluru.
- Participated in the online webinar "An Introductory Course on Fluid Dynamics" organized by the Department of Mathematics, CHRIST (Deemed to be University), Bangalore during 17-20 August and 24-28 August 2020.
- Participated in six-day national level online workshop "Programming Essentials for Mathematics using Python" organized by the Department of Mathematics, CHRIST (Deemed to be University), Bangalore during 9-14 August 2020.
- Participated in the Webinar on "Wolfram Mathametica : An Overview" held on 10 July 2020 organized by the Department of Mathematics and Department of Industrial Engineering and Management at Dr. Ambedkar Institute of Technology, Bengaluru.
- Participated in the "Two Day Online National webinar on Recent Research Topics in Mathematics", held on 28-29 May 2020 organized by the Department of Mathematics, Auxilium College (Autonomous), Vellore.
- Participated in the International Webinar on "Fluid Dynamics and its Applications"during 28-29 May 20 organized by the Department of Mathematics, Government First Grade College, Vijayanagar, Bengaluru.

Declaration

I, hereby, confirm that all the above stated particulars in this CV are true to the best of my knowledge and that I can provide documentary evidence to verify all the given information.