



Dr. Sangamesh

Assistant Professor

Experience (Teaching)

1. RNSIT (July 2026 - till date)
2. G. B. R. Degree College, Huvinahadagali, Vijayanagara, Karnataka (Oct 2022 – Mar 2023)

Qualifications

- B. Sc.** – S.R.M.P.P. Govt. First Grade College, Huvinahadagali, Vijayanagara - 583219. (VSKUB) (2020)
- M. Sc.** – Vijayanagara Sri Krishnadevaraya University, Ballari - 583105. (2022)
- KSET** – KEA, Karnataka. (2024)
- Ph. D.** – Davangere University, Davangere, Karnataka - 577007. (2026)

Specialization (Academics)

- M. Sc.** – Mathematics
- Ph. D.** – Fluid Mechanics

Specialization (Research)

Fluid Mechanics

Research Publications

Selected Publications

1. Sangamesh, Raghunatha, K. R., & Shivakumara, I. S. (2024). Instability of double-diffusive magnetoconvection in a non-Newtonian fluid layer with cross-diffusion effects. *Physics of Fluids*, 36(8), 083122. <https://doi.org/10.1063/5.0221475> (Scopus, WoS)
2. Sangamesh, Chamkha, A. J., & Raghunatha, K. R. (2024). The role of temperature-dependent solubility in the stability of thermohaline convection within a Voigt-fluid layer. *Chinese Journal of Physics*, 92, 1293–1311. <https://doi.org/10.1016/j.cjph.2024.10.035> (Scopus, WoS)
3. Sangamesh, Raghunatha, K. R., & Chamkha, A. J. (2025). Linear stability analysis of thermohaline and magneto-convection in a viscoelastic fluid layer. *Chinese Journal of Physics*, 94, 720–735. <https://doi.org/10.1016/j.cjph.2025.02.016> (Scopus, WoS)
4. Sangamesh, Raghunatha, K. R., & Chamkha, A. J. (2025). Nonlinear stability of thermosolutal convection in a Kelvin–Voigt fluid subject to a vertical magnetic field. *Chinese Journal of Physics*, 96, 377–398. <https://doi.org/10.1016/j.cjph.2025.05.022> (Scopus, WoS)
5. Sangamesh, Raghunatha, K. R., Chamkha, A. J., & Y, V. (2025). Influence of heat source on Casson nanofluid flow over an exponentially stretching sheet. *Partial Differential Equations in Applied Mathematics*, 15, 101262. <https://doi.org/10.1016/j.padiff.2025.101262> (Scopus, WoS)
6. Raghunatha, K. R., Sangamesh, & Shivakumara, I. S. (2026). Multi-diffusive convective instability of a Kelvin–Voigt fluid in porous media under thermal non-equilibrium. *Transport in Porous Media*, 153(2), 16. <https://doi.org/10.1007/s11242-025-02269-y> (Scopus, WoS)
7. Raghunatha, K. R., Sangamesh, Pragathi, C., & Shivakumara, I. S. (2026). On the Stability of Triple-Diffusive Convection in a Voigt Fluid-Saturated Darcy–Brinkman Porous Medium. *Transport in Porous Media*, 153(3), 34. <https://doi.org/10.1007/s11242-026-02289-2> (Scopus, WoS)
8. Dhananjaya, M., Sangamesh, Raghunatha, K. R., & Pragathi, C. (2026). Linear Instability of Penetrative Double-Diffusive Convection in a Darcy–Brinkman–Kelvin–Voigt Fluid-Saturated Porous Medium: A Numerical Study. *Heat Transfer*, 55(4), 2581–2599. <https://doi.org/10.1002/htj.70213> (Scopus, WoS)

9. Sangamesh, Raghunatha, K. R., & Shivakumara, I. S. (2026). Influence of rotation on doubly diffusive instabilities in Navier–Stokes–Voigt fluid. *Pramana*, 100(1), 37. <https://doi.org/10.1007/s12043-025-03067-3> (Scopus, WoS)
10. Sangamesh, Chamkha, A. J., & Raghunatha, K. R. (2026). Instability of double-diffusive convection in Voigt fluid-saturated porous media under local thermal non-equilibrium. *Propulsion and Power Research*. <https://doi.org/10.1016/j.jprr.2026.02.005> (Scopus, WoS)

The above are selected publications. A complete list of my publications is available on my Google Scholar profile: <https://scholar.google.com/citations?user=V4nOjLQAAAJ&hl=en>

Presented/Participated in International/National Conferences

1. Participated in and presented the paper entitled “Effects of Cross-Diffusion on the Onset of Double-Diffusive Magnetoconvection in a Voigt Fluid Layer” at the 68th *International Conference of the Indian Society of Theoretical and Applied Mechanics (ISTAM)*, held from 07-09 December 2023 at the National Institute of Technology, Warangal.
2. Participated in and presented the paper “Soret and Dufour Effects on Thermosolutal Magnetoconvection in a Voigt Fluid Layer” at the *National Conference on Recent Innovations in Science and Engineering (RISE-23)*, conducted on 22 and 23 December 2023 and organized by Government Engineering College, Siwan, Bihar.
3. Participated in and presented the paper “The Effect of Temperature-Dependent Solubility on the Stability of thermohaline Convection in a non-Newtonian fluid Layer” at the *International Conference on Advances in Applied Mathematics (ICAAM-2024)*, held on 10 and 11 January 2024 at Tumkur University, Tumakuru, Karnataka, India.
4. Participated in and presented the paper “The Effect of Temperature-Dependent Solubility on the Stability of Double-Diffusive Convection in a Voigt-Fluid Layer” at the *International Conference on Emerging Trends in Computational Mathematics and Data Science (ICETCMDS-2024)*, held on 10 and 11 January 2024 at Sri Krishna Arts and Science College, Coimbatore, Tamil Nadu, India.

5. Participated in and presented the paper “Thermosolutal Convection in a Navier-Stokes-Voigt Fluid Layer under an Imposed Magnetic Field” at the *National* Conference on Recent Developments in Pure and Applied Mathematics (**RDPAM-2024**), held on 24 February 2024 and organized by D. B. F. Dayanand College of Arts and Science, Solapur, Maharashtra, India, and was awarded the Best Oral Paper Presentation Award.
6. Participated in and presented the paper “Linear Stability Analysis of Multi-Diffusive Convection in a Navier-Stokes-Voigt Fluid Layer” at the 18th *International* Online Conference **MSAST-2024**, along with a workshop on Data Science: Accelerate Your Career, organized by IMBIC, held during 21-23 December 2024 in Kolkata, India.
7. Participated in the 19th *International* Online Conference **MSAST-2025**, along with a workshop on Data Science: Accelerate Your Career, organized by IMBIC, held during 21-23 December 2025 in Kolkata, India.

Invited Talks Delivered

1. Delivered an invited talk on “The Journey from Learning to Creative Research in Mathematics” as a Resource Person at the celebration of “**National Mathematics Day – 2025**”, held at G. B. R. Degree College UG and PG Centre, HuvinaHadagali, Vijayanagara, on Saturday, 20th December 2025, organized by the Department of Mathematics.
2. Delivered an Invited Talk in the Three Days National Level Mathematics Faculty Development Program on “*Mathematica with Computational Mathematics*” (PHBWEL-PCSSEL-NLM-FDP-MCM-2026), held from 28th to 30th March 2026, organized by the Department of Mathematics, Karnatak University Dharwad, Karnataka, India.

Workshops/Seminars/Webinars/Symposium Attended

1. Participated in the Two-Days online workshop on “Data analytics and machine learning through zero coding” organized by Division of Mathematics, School of Advanced Sciences, Vellore Institute of Technology, Chennai on 26th and 27th June, 2023.
2. Participated in the webinar on “Application of MATLAB” organized by Department of Mathematics, School of basic Sciences, Vels Institute of Science, Technology and Advanced Studies (VISTAS), Chennai on 28th December, 2023.

3. Participated in two days Virtual National level workshop on “Research Paper Writing” organized by Applied Sciences and Humanities Department, Parul Polytechnic Institute, Faculty of Engineering and Technology, Parul University, Limda, Vadodara, Gujarat, During 27th January 2024 & 03rd February 2024.
4. Attended the Five days faculty Development Program on “Concept of Pure and Applied Mathematics” from 11-15th March, 2024 Jointly organized by Parul University and Gujarat Ganit Mandal.
5. Participated in one day National webinar on “Recent Progress in Mathematical Sciences” on the occasion of International Day of Mathematics on March 14, 2024, organized by Department of Mathematics, Government Engineering College Bhojpur, Bihar, India.
6. Participated in three days’ Workshop on “Advanced Linear Algebra”, which was organized from 5th July to 7th July, 2024 by CONTINUUM MATH SOCIETY, Department of Mathematics, NIT Jamshedpur.
7. Participated in five days National level Virtual FDP on “Higher Education and Research in India” organized by Seshadripuram academy of business studies, Kengeri Satellite Town, Bengaluru, During 29th July to 2nd August 2024.
8. Participated in five days online FDP on “Algebra, Analysis and Number Theory” organized by Department of mathematics, SRM University, Andhra Pradesh, during 16th to 20th December 2024.
9. Participated in the DST-ANRF Funded Five Days Online Workshop on “Frontiers in Flow Boiling: Exploring Multiscale Transport, Industrial Applications, and Future Pathways” organized from 18th August 2025 to 22nd August 2025.
10. Participated in the AICTE Training and Learning (ATAL) Academy Faculty Development Program on “Next-Gen Computing: From Mathematical Models to AI in Computer Vision” at National Institute of Technology Hamirpur from 15th September 2025 to 20th September 2025.
11. Participated in the International Seminar on “Computational Techniques in Mathematics” organized by the Department of Mathematics, Adikavi Nannaya University, Rajamahendravaram, Andhra Pradesh, on 25th and 26th September, 2025.
12. Participated in the AICTE Training and Learning (ATAL) Academy Faculty Development Program on “Integrating AI & ML and Computational Techniques: Transforming Innovation in Engineering and Sciences” at GHARDA Foundation's GHARDA Institute of Technology from 03rd November 2025 to 08th November 2025.

13. Participated in an Invited Talk on “Stability Analysis of Convection Problems” organized by the Department of Mathematics, SR University, Warangal, India on 12th November 2025.
14. Participated in Invited Talk on “Mathematical Insights: Connecting Theory to Daily Practices” organized by the Department of Mathematics, SR University, Warangal, India on 29th November 2025.
15. Participated in the Five-Day International Online Faculty Development Programme on “Next Generation Research: Integrating Mathematics with Artificial Intelligence” organized by the Department of Mathematics, School of Engineering, Presidency University, Bengaluru, Karnataka, India, held from December 17-22, 2025.
16. Participated in the AICTE Training and Learning (ATAL) Academy Faculty Development Program on “Artificial Intelligence (AI) Leading to Academic Excellence: Transforming Academic Writing & Research” at Oriental College of Management, Bhopal from 12th January 2026 to 17th January 2026.
17. Participated in the AICTE Training and Learning (ATAL) Academy Faculty Development Program on “Digital Application Fundamentals” at NASSCOM from 9th February 2026 to 14th February 2026.
18. Participated in the One-Day International Symposium titled “*Empowering Engineers with Quantum Insights,*” sponsored by PM-USHA and organized by YSR Engineering College, Yogi Vemana University, Proddatur, on 28 March 2026.

Achievements/Awards

1. Awarded the *Al-Hajja Sajida B. Syed Gold Medal* for securing the **highest marks in B.Sc.** at the University level from Vijayanagara Sri Krishnadevaraya University, Ballari.
2. Secured **University Third Rank in B.Sc. (PCM)** from Vijayanagara Sri Krishnadevaraya University, Ballari, in recognition of academic excellence.
3. Received the *Best Oral Paper Presenter Award* at the National Conference on “*Recent Developments in Pure and Applied Mathematics (RDPAM-2024)*”, held at D. B. F. Dayanand College of Arts and Science, Solapur, Maharashtra, India.