

FACULTY PROFILE TEMPLATE

Please ensure that this Template is ‘Thoroughly Followed/Replicated’ in your profile

- ❖ **Please mention year of passing (Educational Qualifications)**
- ❖ **In case of Updating Existing Faculty profiles, please send the new additions in ‘Highlighted Form/Text’.**

Basic Details:

- **Name:** Dr. G. Sathishkumar
- **Designation:** Assistant Professor (O.G.)
- **Phone Number:** 9500591068
- **Email ID:** gskmathspu@gmail.com; sathishg3@srmist.edu.in
- **Area or Subject:** Partial Differential Equations
- **Affiliation:** Department of Mathematics, SRM Institute of Science and Technology, Ramapuram, Chennai.

Educational Details:

- **Degree** – M.Sc., B.Ed., Ph.D.
- **Area or Subject** – Mathematics
- **University**
Ph. D. Mathematics – Periyar University
M.Sc. Mathematics - Periyar University
B.Ed. - Tamil Nadu Teachers Education University
B.Sc. Mathematics - Periyar University

Other Details:

Special Lectures in Colleges:

1. Special lecture on "Introduction to LaTeX" -- E.S.Arts and Science College(Co-Ed.), Villupuram (Oct. 29, 2021).

Research Visits:

1. "IISER-TVM Visiting Research Programme", in the school of Mathematics, Indian Institute of Science Education and Research, Thiruvananthapuram, Kerala (May 21 - July 20, 2015).
2. Department of Applied Sciences, National Institute of Technology Goa, Goa (December 19, 2017 - February 20, 2018).
3. Department of Applied Sciences, National Institute of Technology Goa, Goa (October 01 - December 07, 2018).

Courses:

- Real Analysis
- Complex Analysis
- Functional Analysis
- Topology
- Foundations of Mathematics
- Probability Theory
- Partial Differential Equations

Research Interests: Partial Differential Equations, Mathematical Biology

Publications: (04)

1. L. Shangerganesh, N. Nyamoradi, **G. Sathishkumar** and S. Karthikeyan, Finite-time blow-up of solutions to a cancer invasion mathematical model with haptotaxis effects, *Computer and Mathematics with Applications*, 77 (2019), 2242-2254. (**SCI, Impact Factor 3.370**)
2. **G. Sathishkumar**, L. Shangerganesh and S. Karthikeyan, Lower bounds for the finite-time blow-up of solutions of a cancer invasion model, *Electronic Journal of Qualitative Theory of Differential Equations*, 12 (2019), 1-13. (**SCI, Impact Factor 1.827**)
3. L. Shangerganesh, **G. Sathishkumar**, N. Nyamoradi and S. Karthikeyan, Blow-Up Phenomena of a Cancer Invasion Model with Nonlinear Diffusion and Haptotaxis Term, *Bulletin of the Malaysian Mathematical Sciences*, (2020). (<https://doi.org/10.1007/s40840-020-00996-7>) (**SCI, Impact Factor 0.856**)
4. **G. Sathishkumar**, L. Shangerganesh and S. Karthikeyan, Lower bounds of finite-time blow-up of solutions to a two-species Keller-Segel chemotaxis model, *Journal of Applied Nonlinear Dynamics*, 10(1), 2021, 81-93. (**Scopus, Impact Factor 0.73**)

Papers Presented in international/national conferences:

1. "Lower Bound for Blow-up Time in a Model of Cancer Invasion", National Conference on Computational Topology and Differential Equations (NCCTDE-2018), Anna University Regional Campus & DRDO-BU CLS, Bharathiar University Campus, Coimbatore, Tamil Nadu (April 21, 2018).

2. “Lower Bounds of Finite-Time Blow-up of Solutions to a Two-Species Keller-Segel Chemotaxis Model”, International Conference on Mathematical Modelling, Analysis and Computing (MMAC– 2018), Thiruvalluvar University, Vellore, Tamil Nadu (December 13 – 14, 2018).
3. “Blow-up Phenomena of Solutions of a Chemotaxis Model”, National Conference on Recent Trends in Differential Equations (NCRTDE-2019), St. Joseph's College of Arts and Science for Women, Hosur, Tamil Nadu (January 23, 2019).
4. “Blow-up Phenomena of Solutions to a Cancer Invasion Model”, National Conference on Differential Equations and Dynamical Systems (NCDEDS-2019), National Institute of Technology Puducherry, Karaikal, Tamil Nadu (April 5-6, 2019).
5. “Blow-up phenomena of solutions to a two-species chemotaxis model with non-diffusive chemoattractant”, International Conference on Conjecture with 15th Biennial Conference of ISIAM, Bharathiar University, Coimbatore, Tamil Nadu (December 5-7, 2019).
6. “Blow-up phenomena of solutions to a two species chemotaxis model”, National Conference on Partial Differential Equations and Applications (CPDEA-2020), Periyar University, Salem, Tamil Nadu (March 5-6, 2020).

Working Papers:

- Finite-time blow-up and lower bounds of solutions to a two-species chemotaxis-consumption nonlinear system.

Work in Progress:

- Blow-up and its lower bound for a solution of two-species Keller-Segel chemotaxis model in \mathbb{R}^2 .

Academic Experience:

Guest Faculty in Mathematics:

- **Total Experience : 2 Years 7 Months 14 Days**
- **Institution** : Periyar University PG Extension Centre, Dharmapuri.
- **Period** : From 11.07.2019 to 25.04.2020 (09 Months 17 Days);
From 05.08.2020 to 25.06.2020 (10 Months 21 Days);
From 01.07.2021 to 28.12.2021 (05 Months 28 Days);
From 03.01.2022 to 10.06.2022 (05 Months 08 Days).

Seminars, Webinars, Workshops and Conferences Attended:

1. “Sixth Summer Training Programme in Mathematics”, Ramanujam Institute for Advanced Study in Mathematics, University of Madras, Chennai, Tamil Nadu (May 19 - June 06, 2014).
2. “Mathematics Training and Talent Search Programme (Mini-MTTS)”, Periyar University, Salem, Tamil Nadu (June 23 - July 5, 2014).
3. “Workshop on Analysis and Geometry”, Central University of Tamil Nadu, Thiruvarur, Tamil Nadu (February 13 - 14, 2015).
4. “Workshop on Cyber Crime”, Periyar University, Salem, Tamil Nadu (October 30, 2015).
5. “DBT Funded Workshop on Algebra – 2016”, Vellalar College for Women, Erode, Tamil Nadu (January 21 - 22, 2016).
6. “National Conference on Recent Trends in Analysis and Applications (NCRATA-2016)”, Periyar University, Salem, Tamil Nadu (February 11 – 12, 2016).
7. “National Conference on Control and Inverse Problems”, Central University of Tamilnadu, Thiruvarur (February 26 - 27, 2016).
8. “National Workshop on Advanced Analysis and Differential Equations”, Periyar University, Salem, Tamil

Nadu (June 09 - 17, 2016).

9. “National Conference on Computational and Theoretical Partial Differential Equations”, National Institute of Technology Goa, Goa (October 05 - 07, 2016).
10. “Annual Foundation School – I”, Indian Institute of Science Education and Research(IISER), Thiruvananthapuram, Kerala (Dec 05 – 31, 2016).
11. “National Workshop on Product Graphs”, Periyar University, Salem, Tamil Nadu (Feb 23 - 25, 2017).
12. “Workshop on Mathematica and its Applications”, Periyar University, Salem, Tamil Nadu (March 06 2017).
13. “National Workshop on Differential Equations and Applications”, Periyar University, Salem, Tamil Nadu (March 09 - 10, 2017).
14. “4th National Conference on Advances in Differential Equations and Applications”, Periyar University, Salem, Tamil Nadu (March 23 – 24 2017).
15. “Annual Foundation School – II”, Kerala School of Mathematics (KSOM), Kozhikode, Kerala (May 08 – June 03, 2017).
16. “National Workshop on Topics in Partial Differential Equations”, National Institute of Technology Karnataka, Suratkal (July 24 - 28, 2017).
17. “NCM Workshop on New Directions in PDE Constrained Optimisation”, Indian Institute of Technology Bombay, Mumbai (March 12 - 16, 2018).
18. “National Workshop on Analysis and Applications”, Periyar University, Salem, Tamil Nadu (February 06 - 09, 2019).
19. “One day National Webinar on Stability and Stabilizability of Dynamical Systems” KPR Institute of Engineering and Technology, Coimbatore, Tamil Nadu (24.06.2020).
20. A Special talk on “Introduction to Gröbner basis”, IIT Madras as part of Berchmans Webinar Series in Mathematics organised by the Department of Mathematics, St Berchmans College, Changanassery, Kerala, (11.07.2020).
21. “An overview of Mathematical Softwares and its Applications”, Sagar Institute of Research and Technology, Bhopal, (July 26-28, 2021).
22. “Three day National level Workshop on MATLAB for beginners”, Srimad Andavan Arts and Science College (Autonomous), Trichy, Tamil Nadu, (July 28 – 30, 2021).
23. “Third National Conference on Control and Inverse Problems (CIP 2022)”, held through online mode and jointly organizes by Central University of Kerala, Central University of Tamilnadu and Periyar University, (February 25-26, 2022).
24. “A Special talk on Yoga for Humanity”, SRMIST, Ramapuram, Chennai, (21.06.2022).
25. A Ten-Day online Faculty Development Programme (FDP) on “Mathematical Models for Machine Learning and It’s Applications”, organized by Electronics & ICT Academy, NIT Warangal and Faculty of Science & Technology (IcfaiTech), The ICFAI Foundation for Higher Education(IFHE), Hyderabad (July 11-20, 2022).
26. “A Special talk on Technology Enabled Learning for 21st Century Students”, SRMIST, Ramapuram, Chennai, (16.07.2022).
27. “A Special talk on Personal Development - Looking Inward and focusing on ways to better yourself”, SRMIST, Ramapuram, Chennai, (23.07.2022).
28. “A Special talk on Carving your Career”, SRMIST, Ramapuram, Chennai, (06.08.2022).
29. “A Special talk on Ways to Handle Life`s Stressors”, SRMIST, Ramapuram, Chennai, (13.08.2022).
30. “A Virtual Workshop on Reliability Modeling and its Applications”, SRMIST, Ramapuram, Chennai, (24.08.2022 & 26.08.2022).
31. “A Special talk on Stem Strategy, Role of Teachers”, SRMIST, Ramapuram, Chennai, (05.09.2022).

Achievements and Awards:

- Qualified in TNSET 2016.
- University Research Fellow (URF) in Department of Mathematics, Periyar University, Salem, during from 20.04.2016 to 19.04.2018.

Membership: Nil

Please send in your latest **PASSPORT SIZE photograph.**

