

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. R. Vijayalakshmi
- **Designation:** Assistant Professor
- **Phone Number:** 044 – 43923067
- **Email ID:** vijayalr1@srmist.edu.in
- **Area or Subject:** Fluid Dynamics
- **Affiliation:** Department of Mathematics, SRM Institute of Science and Technology, Ramapuram.

Educational Details:

- **Degree** – M. Sc., M. Phil., Ph. D.
- **Area or Subject** – Mathematics
- **University**

Ph. D. Mathematics – 2020, SRM Institute of Science and Technology, Kattankulathur.

M. Phil. Mathematics – 2001, Ayya Nadar Janaki Ammal College, Affiliated to Madurai Kamaraj University, Sivakasi.

M.Sc. Mathematics – 2000, S. F. R. College for Women, Affiliated to Madurai Kamaraj University Sivakasi.

B.Sc. Mathematics – 1998, S. F. R. College for Women, Affiliated to Madurai Kamaraj University, Sivakasi.

Other Details:

Courses:

- Mathematics I, Mathematics II , Mathematics III
- Probability and Random Processes
- Probability and Queuing Theory
- Numerical Methods
- Discrete Mathematics
- Resource Management Techniques
- Calculus of Variations and Non-linear Programming
- Statistics for Information Technology

Research Interests: Computational Fluid Dynamics

Selected Publications:

- With A. Govindarajan, "Impact of Heat Transfer and Viscous Dissipation on Unsteady MHD oscillatory Dusty Fluid Flow Through a Vertical Porous Channel", *Journal of Physics: Conference Series*, 1377, doi:10.1088/1742-6596/1377/1/012025, (2019).
- With A. Govindarajan, "Effect of partial slip on hydromagnetic oscillatory dusty fluid flow in an asymmetric wavy channel", *AIP Conference Proceedings*, 2112, 020135, <https://doi.org/10.1063/1.5112320>, (2019),
- With A. Govindarajan, "Energy transfer effects in hydromagnetic oscillatory dusty fluid flow in a vertical porous channel", *AIP Conference Proceedings*, 2112, 020161, <https://doi.org/10.1063/1.5112346>, (2019).
- With A. Govindarajan, "Hall Current Effect in MHD Oscillatory Couple Stress Dusty Fluid through an Inclined Saturated Permeable Channel", *International Journal of Engineering & Technology*, 7 (4.10), 801-805, (2018).
- With A. Govindarajan, "Combined effects of heat and mass transfer to magnetohydrodynamics oscillatory dusty fluid flow in a porous channel", *Journal of Physics: Conference Series*, 1000, 012003, doi :10.1088/1742-6596/1000/1/012003, (2018).
- With A. Govindarajan, "Chemically Reacting MHD oscillatory slip flow in an asymmetric channel with both concentration and temperature Variation", *International Journal of Pure and Applied Mathematics*, Vol. 114, No. 6, pp. 61-66, ISSN 1314-8080, (2017).
- With A. Govindarajan, "Slip effect on radiative MHD oscillatory flow with chemical reaction in an asymmetric channel", *Global Journal of Pure and Applied Mathematics*, Vol. 12, No. 2, ISSN 0973-1768, (2016).
- With A. Govindarajan, "Chemical Reaction effects on radiative MHD oscillatory flow in a porous channel with Heat and mass transfer in an asymmetric Channel", *ARPN Journal of Engineering and Applied Sciences*, Vol. 10, No.4, pp. 1839-1845, ISSN1819-6608, (2015).
- With A. Govindarajan, J. Sasikumar, E. P. Siva, "Chemical Reaction effects on radiative MHD oscillatory flow in a porous channel with mass transfer and heat absorption", *International Journal of Scientific Engineering Research*, Vol. 6, Issue 3, pp. 199-203, ISSN 2229-5518, (2015).

Papers Presented:

- R. Vijayalakshmi, A. Govindarajan, "Impact of uniform Suction/Injection on Unsteady MHD Oscillatory Dusty Couette Flow Through a Vertical Porous Channel", International Virtual Conference on "Progress in Mathematics Towards Industrial Applications (PMTIA 2020)", SRM Institute of Science & Technology, Ramapuram, November 2020.
- R. Vijayalakshmi, A. Govindarajan, "Impact of Hall Current and Rotation on Unsteady MHD oscillatory Dusty Fluid Flow Through Horizontal Porous Plates", 3rd International Conference on Mathematical Modelling, Applied Analysis and Computation–2020 (ICMMAAC-20), August 2020.
- R. Vijayalakshmi, A. Govindarajan, "Impact of Heat Transfer and Viscous Dissipation on Unsteady MHD oscillatory Dusty Fluid Flow Through a Vertical Porous Channel", National Conference on Progress in Mathematics Towards Industrial Applications, SRM Institute of Science & Technology, Ramapuram, September 2019.
- R. Vijayalakshmi, A. Govindarajan, "Slip effects on radiative MHD oscillatory dusty fluid in an asymmetric porous channel with heat and mass transfer", Research Day, SRM Institute of Science & Technology, Kattankulathur, February 2019.
- R. Vijayalakshmi, A. Govindarajan, "Effect of Heat Source and Thermal Radiation to MHD oscillatory dusty fluid flow through an asymmetric channel filled with porous medium", National Conference on Mathematical Techniques and Applications, SRM Institute of Science & Technology, Kattankulathur, January 2019.
- R. Vijayalakshmi, A. Govindarajan, "Effect of Heat and Mass Transfer to MHD oscillatory dusty fluid flow with chemical reaction in a channel filled with porous medium", National Conference on Mathematical Techniques and Applications, SRM Institute of Science & Technology, Kattankulathur, January 2018.
- R. Vijayalakshmi, A. Govindarajan, "Chemically reacting MHD oscillatory slip flow in an asymmetric channel with both concentration and temperature variation", National Conference on Recent Trends in Mathematics and its Applications, SRM University, Vadapalani, February 2017.
- R. Vijayalakshmi, A. Govindarajan, "Slip Effect on Radiative MHD oscillatory flow with chemical reaction in an asymmetric channel", National Conference on Recent Trends in Mathematics and its Applications, SRM University, Vadapalani, February 2016.
- R. Vijayalakshmi, A. Govindarajan, "Chemical Reaction Effects on Radiative MHD oscillatory flow in a porous channel with heat and mass transfer in an asymmetric channel", 9th International Conference on Intelligent systems and control, Karpagam College of Engineering, Coimbatore, January 2015.
- R. Vijayalakshmi, A. Govindarajan, J. Sasikumar, E. P. Siva, "Chemical Reaction Effects on Radiative MHD oscillatory flow in a porous channel with Mass transfer and heat absorption", National Conference on Mathematical Techniques and its Applications, SRM University, Kattankulathur, January 2015.
- R. Vijayalakshmi, A. Govindarajan, E. P. Siva, "Effect of Heat and Mass Transfer with Chemical Reaction on the Radiative MHD oscillatory flow in an Asymmetric Channel in the presence of Heat Source", 23rd International Conference of Forum for Interdisciplinary Mathematics on Interdisciplinary Mathematical, Statistical and Computational Techniques, National Institute of Technology, Karnataka, Surathkal, December 2014.

Working Papers:

- With A. Govindarajan, "Effect of MHD oscillatory dusty fluid with variable viscosity through vertical porous channel", 2020.

Work in Progress:

- With A. Govindarajan, Applications of Computational Fluid Dynamics in Medical Field, 2021, Ongoing work

Academic Experience:

- Assistant Professor, SRM Institute of Science and Technology, Ramapuram, August 2008 to Till date
- Lecturer, Saveetha Engineering College, Chennai, Lecturer, June 2005 to August 2008
- Lecturer, PSR Engineering College, Sevalpatti, August 2004 to December 2004

Other Professional Experience:

- Nil

Workshops /Seminars/Conferences:

International Conference

- 3rd International Virtual Conference on “Progress in Mathematics towards Industrial Applications” (PMTIA 2020), 06-Nov-2020, 07-Nov-2020.
- 3rd International Conference on Mathematical Modelling, Applied Analysis and Computation–2020 (ICMMAAC-20), 07-Aug-2020 to 09-Aug-2020.
- 9th International Conference on Intelligent systems and control, Karpagam College of Engineering, Coimbatore, 09-Jan-2015, 10-Jan-2015.
- 23rd International Conference of Forum for Interdisciplinary Mathematics on Interdisciplinary Mathematical, Statistical and Computational Techniques, National Institute of Technology, Karnataka, Surathkal, 18-Dec-2014 to 20-Dec-2014.

National Conference

- National Conference on Progress in Mathematics towards Industrial Applications (PMTIA – 2019), SRM Institute of Science and Technology, Ramapuram, 27-Sep-2019, 28-Sep-2019.
- 11th National Conference on Mathematical Techniques and Applications – NCMTA 2019, SRM Institute of Science and Technology, Kattankulathur, 11-Jan-2019, 12-Jan-2019.
- 2nd National Conference on Recent Trends in Fuzzy Mathematics and its Applications, NCRTFMA 2018, SRM Institute of Science and Technology, Ramapuram, 26-Oct-2018, 27-Oct-2018.
- 10th National Conference on Mathematical Techniques and its Applications NCMTA 2018, SRM Institute of Science and Technology, Kattankulathur, 05-Jan-2018, 06-Jan-2018.
- National Conference on Recent Trends in Fuzzy Mathematics and its Applications NCRTFMA 2017, SRM University, Ramapuram, 03-Nov-2017, 04-Nov-2017.
- National Conference on Recent Trends in Mathematics and its Applications NCRTMA'17, SRM University, Vadapalani, 24-Feb-2017, 25-Feb-2017.
- National Conference on Mathematical Techniques and its Applications NCMTA 2017, SRM University, Kattankulathur, 27-Jan-2017, 28-Jan-2017.
- National Conference on Recent Trends in Mathematics and its Applications NCRTMA'16, SRM University, Vadapalani, 26-Feb-2016, 27-Feb-2016.
- National Conference on Mathematical Techniques and its Applications NCMTA 2015, SRM University, Kattankulathur, 02-Jan-2015, 03-Jan-2015.
- National Conference on Mathematical Techniques and its Applications NCMTA 2014, SRM University, Kattankulathur, 06-Jan-2014, 07-Jan-2014.
- National Conference on Mathematical Techniques and its Applications NCMTA 2012, SRM University, Kattankulathur, 08-Feb-2012, 09-Feb-2012.

Workshop Attended

- Workshop on Differential Equations and its Applications (WDEA – 2019), SRM Institute of Science and Technology, Ramapuram, 07-Mar-2019.
- Workshop on Fluid Dynamics and its Applications (WFDA – 2018), SRM Institute of Science and Technology, Ramapuram, 12-Apr-2018.
- Workshop on Graph Theory and its Applications (WGTA – 2016), SRM University, Ramapuram, 12-Apr-2016.
- National workshop on Role of Mathematics in Bio-Modeling, B. S. Abdur Rahman University, Vandalur, Chennai, 01-Aug-2015, 01-Aug-2015.
- Short term programme on Numerical Methods for Fluid Dynamics, Indian Institute of Space Science and Technology, Thiruvananthapuram, 18-Dec-2012, 20-Dec-2012.

Achievements and Awards:

- Certificate of Appreciation for Publication - SRM University, Kattankulathur, 2015
- Best Paper Presentation Award – International Conference conducted by the Department of Mathematics – JECRC University, Jaipur, Rajasthan, India, August 2020

Membership:

- Indian Science Congress, 2011

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

