

Name : **Dr. R. Sowrirajan**
Designation : Assistant Professor & Head
Department : Mathematics
Qualification : M.Sc., M.Phil., Ph.D.
Experience : Teaching - 15 Years 1 Month | Research - 3 Years
Area of Specialization(s): Partial Differential Equations, Mathematical Finance
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Academic Qualifications

Degree	Branch	Institution / University Name	Year
Ph.D.	Mathematics	Bharathiar University, Coimbatore	2009
M.Phil.	Mathematics	Bharathiar University, Coimbatore	2005
M.Sc.	Mathematics	Sri Ramakrishna Mission Vidyalaya College of Arts and Science, Coimbatore	2003
B.Sc.	Mathematics	N.G.M College, Pollachi	2001

Research Guidance

Programme	No. of Scholars	
	Completed	Pursuing
Ph. D.	-	2
M. Phil.	2	-

Other Publications: International / National Journals

- K.Balachandran, K.Sakthivel, R.Sowrirajan and J.H.Kim, **On Exact Null Controllability of Black-Scholes Equation**, Kybernetika , Vol 44, (2008), 685-704
- R.Sowrirajan and K.Balachandran, **Determination of a source term in a Partial Differential Equation arising in Finance**, Applicable Analysis, Vol 88 (2009), 131-140.
- R.Sowrirajan and K.Balachandran , **Existence and uniqueness results for semi linear Black-Scholes type equation**, Nonlinear Analysis: Real world Applications, Vol 11, (2010), 2796- 2809.
- P.Sozhaeswari, R. Sowrirajan, K.Loganathan and S. Gyeltshen, **“A study on the Impact of Non-linear Source Term in Black-Scholes Option Pricing Model”** Abstract and Applied Analysis, Vol. 2022.

Presentations in Conference

- **Carleman Inequality and Parabolic Partial Differential Equations**, National Conference on Partial Differential Equations and Applications (Fluid Flow and Control), Bharathiar University, 10-Mar-05 to 11-Mar-05
- **Carleman Estimate for 3D Black-Scholes equation**, Recent trends in Non-linear Differential Equations and Dynamical Systems, P.S.G. College of Arts and Science. 24-Mar-06 to 25-Mar-06
- **Stability of Black-Scholes equation by Carleman Estimate**, National Conference on Partial Differential Equations and Applications, Periyar University. 10-Mar-06 to 11-Mar-06
- **An Inverse problem for a certain Parabolic Integrodifferential equation**, Proceedings of the National Conference on Applications of Partial Differential Equations, Bharathiar University. 24-Jan-07 to 25-Jan-07.

Participation in Conference

National:

- **National Conference on Fluid Flow and Control**, Bharathiar University, 16-Mar-04 to 17-Mar-04.
- **XII Ramanujan Symposium on Recent Trends in Analysis**, Ramanujan Institute for Advanced Study in Mathematics, University of Madras. 2-Mar-05 to 4-Mar-05.
- **International Conference on Nonlinear Dynamical Systems**, Bharathiar University. 24-Mar-06 to 26-Mar-06.
- **International Conference and Symposium on AI advancements in Hyperbolic and Parabolic PDE's, (virtual mode)**, University of Calicut, INDIA and UNIST, Korea, 20 to 22-Oct-23.

Participation in Seminars

- **Partial Differential Equations**, Bharathiar University, 6-Nov-09.
- Winter School on **Introduction to Partial Differential Equations**, Nonlinear Studies Group, Indian Institute of Science, Bangalore. 19-Dec-05 to 23-Dec-05,

Participation in Workshop

- **Second SERC School on Aviation Meteorology, with special emphasis on Thunderstorm and its modelling**, Air Force Administrative College, Coimbatore and secured Satisfactory grade in Seminar Presentation. 9-May-05 to 28-May-05.

- **Innovation, IPR, Entrepreneurship and Start-ups among HEI's (Online mode)**, April 28- May 22, 2020, Institution Innovation Council of MHRD' Innovation Cell, New Delhi.
- **Digital Teaching Techniques (Online mode)**, June 29- July 04,2020, ICT Academy.
- **Introduction to Programming Using Python** on July 24,2020 conducted by Microsoft Technology Associate
- **Advanced Topics in Partial Differential Equations**, Central University of Tamil Nadu, Thiruvavur, 29-Dec-23 to 11-Jan-24.

Participation in Faculty Development Programme

- **Pedagogical Knowledge of Mathematics, the teaching of Linear Algebra**", Central University of Tamil Nadu, Thiruvavur, 18-Dec-17 to 22-Dec-17.
- **Quality Measures in Higher Education**, Dr. N.G.P. Arts and Science College, Coimbatore, 3-Dec-18 to 9-Dec-18.
- **NAAC Revised Accreditation Framework and OBE Assessment Methodology**, Dr. N.G.P. Arts and Science College, Coimbatore, 27-May-19 to 02- Jun-19.
- **Quality Initiatives in Higher Education (Online mode)**, Dr. N.G.P. Arts and Science College, Coimbatore, 13-Apr-20 to 20—Apr-20.
- **Application of Moodle LMS (Online mode)**, Crescent Institute of Science and Technology, Chennai and D.Y. Patil College of Engineering, Aduridi, June 11-25, 2020
- **Computational Tools and Techniques: MATLAB (Online mode)**, Symbiosis University of Applied Sciences, Indore and Mathworks, July 27-31, 2020.
- **Research Methodology and Pedagogy for Tertiary Education (Online mode)**, Dr. N.G.P. Arts and Science College, Coimbatore, June 15-June 21,2021
- **National Education Policy 2020; Revisioning Higher Education in India (Online mode)**, Teaching Learning Centre, Ramanujan College, University of Delhi, August 30-September 07, 2021.
- **Research Methodology using ChatGPT and AI tools (Online mode)**, jointly organised by Marian College Kerala and The Kerala State Higher Education Council, September 21-September 29,2023.

Conference / Seminar / Workshop Organized

- Convenor, National Conference on Advances in Partial Differential Equations (**Sponsored by SERB and CSIR**), December 13-14, 2013.
- Convenor, National Conference on Recent Advances in Theoretical and Computational Methods for Partial Differential Equations (**Sponsored by SERB**), January 6-7, 2017.

- Convenor, National Conference on Stochastic Differential Equations and its Applications, 27-Dec-17.
- Convenor, National Hands-on-workshop on Finite Element Analysis for Beginners and Engineers (sponsored by CSIR), December 20-21,2018.
- Convenor: National Conference on Emerging Trends in Mathematics with Computer Applications. September 12-13,2019.
- Convenor: National Conference on Applications of Statistics in Biological Sciences, February 7-8,2019.
- Convenor: International Conference on Emerging Trends in Mathematical Sciences, February 18,2019.
- Convenor: Two days FDP on Recent Advances in Mathematics, June 2-3,2019
- Convenor: National Conference on Research Trends in Basic and Applied Sciences, March 2-3,2020.
- Coordinator: Science Academies Refresher Course in Differential Equations and its Applications (Sponsored by INSA, IASc and NASC), August 11-26,2021.

Invited Speaker / Session Chair- Conference / Seminar / Workshop

- **Invited Speaker**, “**Mathematics and Vedic Mathematics (Need and Practice)**”, Dr. N.G.P. Institute of Technology, Coimbatore on 15-Jun-19.
- **Invited Speaker**,” **Mathematical Finance - An Introduction**”, Tiruppur Kumaran College for Women, Tirupur on 29-Jul-19.
- Invited speaker, **National Conference on Stochastic differential equations**, Sri Ramakrishna Mission Vidyalaya College of Arts and Science, Coimbatore on 5-Feb-18.
- **Invited Speaker**, ” **Mathematical Modeling**”, P.S.G. College of Arts and Science, Coimbatore on 19-Sep-19
- **Invited Speaker**, “**Modern Teaching methods**”, Mathematics Club inauguration of Dr. N.G.P. College of Education, Coimbatore. 27-Nov-19
- **Invited Speaker**, “**Option Pricing Models and its Impact in Financial Markets**”, **International Conference on New Trends in Differential Equations and Applied Mathematics**”, April 13,2021, Christ University and Sri Vidya Mandir Arts and Science College.
- **Chief guest: Inauguration of Mathematics club and National Mathematics Day Celebration**, Dr. N.G.P. College of Education, Coimbatore, 22-December-21.
- **Adjudicator for CBSE Regional Science Exhibition 2022-23** at National Model Senior Secondary School, December 2-3, 2022.

- **Invited Speaker, “Applications of Green’s Function”.** P.K.R. Arts College for Women, Gobi on 31-Mar-2023

Member in BOS/Doctoral Committee

- Board of Mathematics, Sri Ramakrishna Mission Vidyalaya College of Arts and Science, 2016-2022.
- Member of Doctoral Committee for research scholars of Bharathiar University and Anna University.
- Adjudicator for CBSE Regional Science Exhibition 2022-23, Central Board for Secondary Education, December 22-23, 2022.

Books Authored / Edited/ Compiled

- Compilation: Business Mathematics and Statistics (2020), Mc-Graw Hill, ISBN: 978-93-5316-848-3.