Name   **:** Dr. S. Mathankumar

Designation   **:** Assistant Professor

Department   **:** Mathematics

Qualification : M.Sc., M. Phil., Ph. D.

Experience   **:** Teaching– 7.4 Years | Research – 12 Years | Industry – 0 Years

Specialization: Differential Equations, Fuzzy Mathematics

Email *(Official)***:** mathankumar@drngpasc.ac.in

Academic Qualifications

Degree	Branch	Institution / University Name	Year
Ph. D.	Mathematics	Bharathiar University, Coimbatore.	2018
M. Phil.	Applied Mathematics	Bharathiar University, Coimbatore.	2012
M. Sc.	Mathematics with Computer Applications	Bharathiar University, Coimbatore.	2010
B. Sc.	Mathematics with Computer Applications	Hindusthan College of Arts & Science, Coimbatore.	2008

Additional Qualifications

Dip. / Cert.	Area of Specialization	Institution / Agency	Year
Udemy- Online Certificate Course	Introduction to R Programming	Udemy, Inc.	2021
Infosys Springboard - Online Certificate Course	Basics of Python	Infosys Ltd.	2022
GUVI - Online Certificate Course	Python	GUVI (Grab Your Vernacular Imprint) Geek Network Private Limited is a leading online learning and skills development company, incubated by IIT Madras and IIM Ahmedabad.	2023
Infosys Springboard - Online Certificate Course	Basic CShap Programming	Infosys Ltd.	2023

Infosys Springboard - Online Certificate Course	Advanced CShap Programming	Infosys Ltd.	2023
Infosys Springboard - Online Certificate Course	Master Math by Coding in Python	Infosys Ltd.	2023
Infosys Springboard - Online Certificate Course	Data Structures and Algorithms using Python – Part 2	Infosys Ltd.	2025
Infosys Springboard - Online Certificate Course	Fundamentals of Data Networking springboard certificate	Infosys Ltd.	2025
Infosys Springboard - Online Certificate Course	Data Structures and Algorithms using Python – Part 1	Infosys Ltd.	2025
HCL Technologies Ltd – Skill India	SOAR - AI for Educator	Skill India	2025

Research Guidance

Programme	No. of Scholars	
	Awarded	Pursuing
Ph. D.	-	4

Research Publications

S. Mathankumar and M. Lavanya, **Neuro-QFLC: A Hybrid Neural-Fuzzy Framework for EHD Thermal Regulation under Joule Heating Constraints**, International Journal of Mechanical Engineering, Vol. 12, No. 10, October 2025, pp.10-21, ISSN: 2348-8360, (Indexed in SCOPUS).

S. Narayanamoorthy, S. Mathankumar and D. Kang, **An Algorithmic Approach for Coupled System of fuzzy Differential Equations**, Dynamics of Continuous, Discrete and Impulsive Systems Series A, Vol. 30, No. 4, June 2023, pp.277-292, ISSN: 1918-2538, (Indexed in SCOPUS).

Mathankumar S. and Poornima D. S., **An Approximate Solution for Fuzzy Volterra Integro-differential Equations using Variational Iteration Technique**, Advances in Dynamical Systems and Applications (ADSA), Vol. 16, No. 2, December 2021, pp. 1455-1467, ISSN: 0973-5321, (Indexed in SCOPUS).

S. Narayanamoorthy and S. Mathankumar, **Variational iterative method: an appropriate numerical scheme for solving system of linear Volterra fuzzy integro-differential equations**, Advances in Difference Equations, Vol. 2018 No. 394, Issue 2018, pp. 1-15, October 2018, ISSN: 1687-1847, (Indexed in SCIE).

S. Narayanamoorthy and S. Mathankumar, **Vaguenesses determinations of hybrid differential equations**, International Journal of Pure and Applied Mathematics, Vol. 117 No. 13, Special Issue 2017, pp. 333-341, December2017, ISSN: 1314-3395, (Indexed in SCOPUS).

S. Narayanamoorthy and S. Mathankumar, **Hybrid fuzzy differential equations - Picard's method**, International Journal of Pure and Applied Mathematics, Vol. 113 No. 12, Special Issue 2017, pp. 133-141, May2017, ISSN: 1314-3395, (Indexed in SCOPUS).

T. L. Yookesh, S. Mathankumar and S. Narayanamoorthy, **Iterating the higher order nonlinear fuzzy delay differential equations**, International Journal of Pure and Applied Mathematics, Vol. 119 No. 11, Special Issue 2018, pp. 477-485, October 2017, ISSN: 1314-3395, (Indexed in SCOPUS).

S. Narayanamoorthy and S. Mathankumar, **Analysis of Euler and Modified Euler Method to Evaluate Hybrid Fuzzy Differential Equations**, Jamal Academic Research Journal (JARJ): An Interdisciplinary, Special Issue 2017, pp. 333-341, February2017, ISSN: 0973-0303.

S. Narayanamoorthy, S. Mathankumar and K. Thangapandi, **Study on average super fuzzy cognitive maps (ASFCM) and its application**, Science Spectrum, Vol. 1 No. 3, pp. 343-346, July2016, ISSN 2455-5053.

Presentations in Conference/ Seminar

International
Analyzing the impact of social awareness and food intake optimization control, AICTE Sponsored international conference on New-Gen Technologies for Sustainable Development

(ICNGTS-2025), Nehru Group of Institutions, Coimbatore, 27-Mar-25 to 29-Mar-25. (AICTE Sponsored)

Iterative process of hybrid fuzzy differential equations, UGC Sponsored One Day International Seminar on Algebra and Applied Mathematics, held at HajeeKaruthaRowther College, Theni, 11-Jan-18, (UGC Sponsored).

Evaluation of hybrid fuzzy differential equations using iterative technique, UGC Funded International Conference on Intuitionistic Fuzzy sets and Systems, Vellalar College for Women, Erode, 08-Jan-18 to 10-Jan-18, (UGC Sponsored).

Vaguenesses determinations of hybrid differential equations, International Conference on Advances in Applicable Mathematics, Bharathiar University, Coimbatore, 07- Dec-17 to 08-Dec-17.

Reputation scheme for hybrid fuzzy differential equations, on International conference on Recent Trends in Mathematics (ICRTM 2017), Loyola College, Chennai, 07-Mar-17.

An appropriate method to study hybrid differential equations in fuzzy environment, International conference on Mathematical Modelling and Computational Methods in Science and Engineering (ICMMCMSE-2017), Jointly Ramanujan Centre for Higher Mathematics and Alagappa University, Karaikudi, 20-Feb-17 to 22-Feb-17.

Evaluate hybrid fuzzy differential equations by using variational iteration method, 14th Indian Science Congress, held at Sri Venkateshwara University, Tirupati, 3-Jan-17to 7-Jan-17.

Iterating the higher order nonlinear fuzzy delay differential Equations, International Conference on Mathematical Computer Engineering (ICMCE-16), VIT Chennai, 16- Dec-16 to 17-Dec-16.

Modified Euler method to evaluate hybrid fuzzy differential equations, International Conference on Mathematical Computer Engineering (ICMCE-15), VIT Chennai, 14- Dec-15 to 15-Dec-15.

National

Linear fuzzy differential system using iterative approximation technique, National Conference on Recent Advances in Mathematics - NCRAM'18, St. Peter's Institute of Higher Education and Research, Chennai, 25-Apr-18.

An iterative technique for system of fuzzy differential equations (SFDEs), UGC Sponsored One Day National Conference on Student and Faculty Research in Mathematical Sciences, held at Government Science College, Bangalore, 24-Apr-18, (UGC Sponsored).

An iterative approach of hybrid fuzzy differential equations, UGC Sponsored National Seminar on Recent development in Fuzzy Set Theory, Christ College, Thrissur, 16- Feb-17 to 17-Feb-17, (UGC Sponsored).

Hybrid fuzzy differential equations - Picard's Method, National Conference on Mathematical Techniques and their Applications (NCMTA 2017), Conducted by SRM University, Chennai, 27- Jan-17 to 28-Jan-17.

Solution hybrid fuzzy differential equations by using modified Euler method, Emerging Trends in Mathematical Sciences - NCETMS 2016, S.A. Engineering College, Chennai, 22-Dec-16

Analysis of Euler and Modified Euler Method to Evaluate Hybrid Fuzzy Differential Equations, UGC Sponsored National Conference on Graph Theory and their Applications, Jamal Mohamed College, Tiruchirappalli, 10- Feb-16 to 11-Feb-16, (UGC Sponsored).

Study on average super fuzzy cognitive maps (ASFCM) and its application, 1st A.P. Science Congress, Sri Venkateswara University, Tirupati, 27-Jan-16 to 29-Jan-16.

Participation in Conference/Seminar

International

International Conference on Mathematical Modeling and Applied Soft Computing-MMASC 2012,Department of Mathematics, Coimbatore Institute of technology, Coimbatore, 11- Jul-12 to 13-Jul-12.

National

National Conference on Emerging Education Models for 21st Century Learner (NCEEM - 2015), Association of Principals of Colleges of Bharathiar University, Dr. N.G.P. Arts and Science College, Coimbatore, 01-Aug-15.

National Conference on Recent Trends in Basic and Applied Sciences, Dr. N.G.P. Arts and Science College, Coimbatore, 2-Mar-20 to 3-Mar-20.

Emerging Trends in Mathematics with Computer Applications, Dr. N.G.P. Arts and Science College, Coimbatore, 12-Sep-19 to13-Sep-19.

National seminar on developing interdisciplinary research projects in mathematics, P.S.G.R. Krishnammal College for women, Coimbatore, 20-Aug-07.

Participation in Orientation Programme / Short Term Courses

Quiz Whiz on Statistics in commemoration of National Statistics Day, PSGR Krishnammal College for Women in Coimbatore, 28- June -25 to 30- June -2025.

The Agnirva Space Internship Program (Recognized by AICTE), 21-Mar-25.

International Webinar on Applications of Topology in Data Analytics, Hindusthan College of Arts & Science, Coimbatore, 22-Feb-23.

Webinar on Stochastic Process and its Applications, Vivekananda college, Tiruvedakam west, Madurai, 18-Oct-21.

UGC Sponsored Webinar on Data Analysis with Open Source Software, Madurai Kamaraj University, 21- Aug - 21.

Webinar on Poincare Conjecture Department of Mathematics, KPR Institute of Engineering and Technology, Coimbatore, 09-Aug-21.

Webinar on Relevance of Mathematics in Control Systems, KPR Institute of Engineering and Technology, Coimbatore, 07-Aug-21.

Webinar on Development of Governing Equations of Fluid Flow, KPR Institute of Engineering and Technology, Coimbatore, 02- Aug-21 to 03-Aug-21.

One day Webinar on Applications of Finite Volume Method in Heat Transfer Problems, Sri Venkateswara College of Engineering, Sriperumbudur, 25-Jun-21.

Webinar on Build a Career in Management (CAT, XAT, MAT), Hindusthan College of Engineering and Technology, Coimbatore, 19- Jun-21.

Webinar on Application of Linear Algebra in Differential Equation, Sadakathullah Appa College (Autonomous), Tirunelveli, 16- June-2021.

Three days webinar on Higher Mathematics PG Department of Mathematics, Thiyagi Dharmakkan Amirtham College of Arts & Science, Kannirajapuram, Ramanathapuram, 25-May-21 to 27-May-21.

National Webinar on Dynamical Systems and Applications, Nehru Institute of Engineering and Technology, Coimbatore on 27-May-21.

Online course on Introduction to R Programming, Udemy, 06-May-21.

Two Days International Webinar on Computational Mathematics, Government First Grade College, Vijayanagara, Bengaluru, 10- Feb- 21 to 11-Feb- 21.

Webinar on Applications of Statistics, Michael Job College of Arts and Science for Women, Coimbatore, 18-Aug-20.

Webinar on Bessel Functions: Zeros and Applications, Nehru Institute of Technology, Coimbatore, 07-Aug-20.

International webinar on Numerical and Scientific Computing, Manipal University, Jaipur, 28-Jul-20.

International webinar on Recent trends in Mathematics, Government Arts College, Udhagamandalam, 10 -11-Jul–20.

Two-day webinar on Applications of Mathematics in Mechanical Engineering, KPR Institute of Engineering and Technology, Coimbatore, 11- Jun-20 to 12-Jun-20.

Two days webinar on Partial Differential Equations: Theory & Applications, Nirmala College for Women, Coimbatore, 25- May-20 to 26-May-20.

Two days webinar on LaTex – Learning by doing, Idhaya College for Women, Kumbakonam, 15- May-20 to 16-May-20.

Webinar on Importance of Mathematics in Artificial Intelligence & Machine Learning And Imaging, PSG College of Arts and Science, Coimbatore, 13-May-20.

Webinar programme on How to be secured in Digital Era, SRM Institute of Science and Technology, Ramapuram Campus, 05-May-20.

National Level Webinar on Joy of Orderly Living, Kaamadhenu Arts and Science College, Erode, 05-May-20.

Finishing school-Aptitude coaching for mathematics teachers-2013, Bharathiar University, Coimbatore, 17- Dec-13 to 18-Dec-13.

Participation in Faculty Development Programme

Exploring Recent Trends in Applied Mathematics and Machine Learning, Koneru Lakshmaiah Educatiob Foundation, Hyderabad, Telangana, 20-May-24 to 24-May-2024.

Mathematics and its Appplications, PSGR Krishnammal College for Women, Coimbatore, 11-May-24 to 15-May-24.

Empowering Education for Innovation – A NEP Perspective, Dr. N. G. P. Arts and Science College, Coimbatore, 30 - Jun- 23 to 04 - Jul -23.

Advanced Latex, School of Advanced Sciences (SAS), Vellore Institute of Technology, Chennai, 27- Jun - 22 to 29- Jun - 22.

Computing with Matlab and Latex Software: Indispensable Tools for Researchers, Math Tech Thinking Foundation (MTTF), India, 05-Jan-2022 to 11-Jan-2022.

Graph Theory, Vellalar College for Women, Erode, 21-Dec-21 to 23- Dec-21.

Recent Trends and Challenges in Robotics and Automation (RTCRA-21), Manipal University, Jaipur, 13-Dec-21 to 17-Dec-21.

Framework for Internet of Things (IoT) Applications, Dr. N. G. P. Arts and Science College, Coimbatore, 21- Sep–21 to 24-Sep–21 & 28- Sep–21 to 30- Sep–21.

Research Methodology and Pedagogy for Tertiary Education, Dr. N. G. P. Arts and Science College, Coimbatore, 15 - Jun-21 to 21- Jun-21.

Teaching Learning Process Through Revised Blooms Taxonomy, Dr. N. G. P. Institute of Technology, Coimbatore, 1 - Jul-21 to 2- Jul-21.

Mathematical Tools, Hindusthan College of Engineering and Technology, Coimbatore, 21-Jun-21 to 25-Jun-21.

Matlab and Its Applications, Dr. N. G. P. Institute of Technology, Coimbatore, 07- Jun-21 to 12-Jun-21.

Industrial Revolution 4.0: Emerging Trends in Information Technology, PPG College of Arts and Science, 21-May-21 to 28-May-21.

Research Management Analysis Tools and Technique, Sankara College of Science & Commerce, Coimbatore, 24-May-21 to 28-May-21.

MATLAB for Engineering and Scientific Computations, B K Birla Institute of Engineering & Technology, Pilani, 22-Feb-21 to 26-Feb-21.

Applications of Mathematics in Engineering (Series - IV), KPR Institute of Engineering and Technology, Coimbatore, 25-Aug-20 to 28-Aug-20.

Appraisal of Mathematical Learning Outcomes in Cybergogy Environment, Arul Anandar College (Autonomous), Madurai, 15-Jul-20 to 17-Jul-20.

NAAC Revised Accreditation Framework and OBE Assessment Methodology, Dr. N.G.P. Arts and Science College, Coimbatore, 27-May-19 to 2-Jun-19.

Graph Theory – A Research View, Nirmala College for Women, Coimbatore, 26-May-20.

Real Life Applications of Fuzzy Mathematics, St.Peter's Institute of Higher Education and Research, Chennai, 22-May-20.

R Programming, Indo Global Group of Colleges, New Chandigarh in association with IIT Bombay Spoken Tutorial (An Initiative of National Mission on Education through ICT, MHRD, Govt. of India), 27-Apr-20 to 1-May-20.

Documentation of Graph using LaTex, C Abdul Hakeem College of Engineering and Technology, Vellore, 13-May-20.

Research Methodology, Bharathiar University Arts and Science College, Pollachi, 27-Apr-20

Quality Initiatives in Higher Education, Consortium of Colleges, 13- Apr-20 to 20-Apr-20.

Recent Advances in Mathematics, Dr. N.G.P. Arts and Science College, Coimbatore, 2-Mar-20 to 3-Mar-20.

Participation in Workshop

One Day Training Programme on Foundation of Mathematics (Online), Department of Statistics and Applied Mathematics, Central University of Tamil Nadu, 24-Feb-2024.

IST - Partial Differential Equations and their Applications to Image Processing (2024), IIT Mandi, Himachal Pradesh, 3-Jun-2 to 15-Jun-24.

Digital Creativity Skills, Adobe Academic Essentials Program, 29-May-23.

Basic Computing with Matlab, Math Tech Thinking Foundation (MTTF), India, 23-Jan-22 to 13-Feb-22.

Applicable Mathematics, KPR Institute of Engineering and Technology, Coimbatore, 20-Dec-21 to 21-Dec-21.

Fractional Dynamical systems, Bannari Amman Institute of Technology, Sathyamangalam, 26-Jun-21.

Rural Immersion – Community Engagement, NSS Unit Dr. N.G.P. Arts and Science College, Coimbatore, 21-Sep-19.

Mathematics and its engineering applications (MEA 2018), NIT Calicut, 26-Oct-18.

Theoretical and Computational Fluid Dynamics, Bharathiar University, Coimbatore, 06-Oct-17.

Career in Statistics, Bharathiar University, Coimbatore, 24-Feb-11.

Aptitude training & Skills Development, Bharathiar University, Coimbatore, 26- Mar-10 to 27-Mar-10.

Conference / Seminar / Workshop Organized

Organizing committee member, One Day National Conference on Emerging Trends in Physical Sciences and Mathematics (ETPSM-2023), Dr. N.G.P. Arts and Science College, Coimbatore, 12- Apr-23.

Coordinator, Srinivasa Ramanujan Birthday Celebrations, E-Quiz Programme, Department of Mathematics, Dr. N. G. P. Arts and Science College, Coimbatore, 18-Dec-21 to 19- Dec-21.

Organizing committee member, Indian Academy of Sciences, Bengaluru Indian National Science Academy, New Delhi The National Academy of sciences, India, Prayagraj, Sponsored Science Academics Refresher Course in Differential Equations and its Applications, Department of Mathematics, Dr. N. G. P. Arts and Science College, Coimbatore, 11-Aug -21 to 26- Aug -21.

Organizing committee member, Two Day National Conference on Emerging Trends in Mathematics with Computer Applications (ETMCA-2019), Dr. N.G.P. Arts and Science College, Coimbatore, 12- Sep-19 to 13-Sep-19.

Invited Speaker / Session Chair/ Reviewer

Person, UGC SAP Sponsored International Conference on Advances in Applicable Mathematics, Bharathiar University, Coimbatore, 21- Feb-20 to 22-Feb-20.

Awards / Honors

Awards / Honors	Agency / Institute	Year
Certificate of Appreciation for "Sincere Efforts in Effective Dissemination of Subject Knowledge Using Appropriate Teaching Pedagogy and ICT Tools"	Dr. N.G.P. Arts and Science college, Coimbatore	2020
Best Mentor	Dr. N.G.P. Arts and Science College, Coimbatore	2020
Best Mentor	Dr. N.G.P. Arts and Science College, Coimbatore	2022