

Name : Dr. S. MATHANKUMAR
Designation : Assistant Professor
Department : Mathematics
Qualification : M.Sc., M. Phil., Ph. D.
Experience : Teaching: 4 years 3 Months Research: 7.4 years
Area of Specialization(s) : Fuzzy Mathematics
Email (Official ID) : mathankumar@drngpasc.ac.in



Academic Qualifications

Degree	Branch	Institution / University Name	Year of Graduation
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

Diploma / Certification	Area of Specialization	Institution / University	Year
Udemy- Online Certificate	Introduction to R Programming	-	2021

Research Publications (Indexed)

International

- S. Narayanamoorthy, S. Mathankumar and D. Kang, **An Algorithmic Approach for Coupled System of fuzzy Differential Equations**, Dynamics of Continuous, Discrete and Impulsive Systems, Accepted. (SCOPUS, UGC Listed)

- S. Mathankumar, D.S. Poornima and S. Zulfiya Nihara, An Approximate Approach for the System of Fredholm Integral Equations, *Advances and Applications in Mathematical Sciences*, Vol. 22, No. 2, December 2021, pp. 581-595, ISSN 0974-6803.
- 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. **(SCOPUS, UGC Listed)**
- 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. **(Science Citation Index Expanded (SCIE), IF: 1.751)**
- 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, December 2017, ISSN: 1314-3395. **(SCOPUS, UGC Listed)**
- 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, May 2017, ISSN: 1314-3395. **(SCOPUS, UGC Listed)**
- 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. **(SCOPUS, UGC Listed)**

Other Publications: International / National Journals

National

- 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, February 2017, ISSN: 0973-0303.
- S. Narayanamoorthy, S. Mathankumar and K. Thangapandi, **Study on average super fuzzy cognitive maps (ASFCEM) and its application**, *Science Spectrum*, Vol. 1 No. 3, pp. 343-346, July 2016, ISSN 2455-5053.

Presentations in Conference

International

- **Iterative process of hybrid fuzzy differential equations**, UGC Sponsored One Day International Seminar on Algebra and Applied Mathematics, held at Hajee Karutha Rowther 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

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.

Participation in Seminars

National

- 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 to 13-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 Workshop

- Science Academies' Lecture Workshop on Engineering Mathematics, Department of Mathematics, KPR Institute of Engineering and Technology, Coimbatore, 04-Jan-23 to 05-Jan-23.
- Training workshop on "Basic Computing with Mat Lab" Math Tech Thinking Foundation (MTTF), India, 23-Jan-2022 to 13-Feb-2022 (Weekend).
- Science Academies' Virtual Lecture Workshop on Applicable Mathematics, Department of Mathematics, KPR Institute of Engineering and Technology, Coimbatore, 20-Dec-21 to 21-Dec-21.
- One day workshop on "Fractional Dynamical systems" Department of Mathematics, 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.
- One day workshop on "Mathematics and its engineering applications (MEA 2018)", NIT Calicut, 26-Oct-18.
- Science Academies' Lecture on Theoretical and Computational Fluid Dynamics, Department of Mathematics, Bharathiar University, Coimbatore, 06-Oct-17.
- Placement Workshop on Career in Statistics, Department of Statistics, Bharathiar University, Coimbatore, 24-Feb-11.
- Placement Workshop on Aptitude training & Skills Development, Department of Applied Mathematics, Bharathiar University, Coimbatore, 26- Mar-10 to 27-Mar-10.

Participation in Orientation Programme / Short Term Courses

- Webinar on "Stochastic Process and its Applications", Department of Mathematics, Vivekananda college, Tiruvedakam west, Madurai, 18-Oct-21.
- Webinar on "Data Analysis with Open Source Software" Madurai Kamaraj University, 21- Aug - 21. **(UGC Sponsored)**
- 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” Department of Mathematics, KPR Institute of Engineering and Technology, Coimbatore, 07-Aug-21.
- Webinar on “Development of Governing Equations of Fluid Flow” Department of Mathematics, 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” Department of Applied Mathematics, 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” organized by Department of Mathematics (Unaided), 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” Department of Science and Humanities, Nehru Institute of Engineering and Technology, Coimbatore on 27-May-21.
- Online course on “Introduction to R Programming”, Udemy, 06-05-21.
- Two Days International Webinar on “Computational Mathematics” Departments of Mathematics and Computer Science, Government First Grade College, Vijayanagara, Bengaluru, 10- Feb- 21 to 11-Feb- 21.
- Webinar on “Applications of Statistics”, Department of Mathematics, Michael Job College of Arts and Science for Women, Coimbatore, 18-Aug-20.
- Webinar on “Bessel Functions: Zeros and Applications”, Department of Mathematics(S&H), Nehru Institute of Technology, Coimbatore, 07-Aug-20.
- International webinar on “Numerical and Scientific Computing, Department of Mathematics and Statistics, Manipal University, Jaipur, 28-Jul-20.
- International webinar on “Recent trends in Mathematics”, Department of Mathematics, Government Arts College, Udthagamandalam, 10 -11-Jul–20.
- Two day webinar on Applications of Mathematics in Mechanical Engineering by department of mathematics, 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”, Department of Business Administration, 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, Department of extension and career guidance, Bharathiar University, Coimbatore, 17- Dec-13 to 18-Dec-13.

Participation in Faculty Development Programme

- One Week Faculty Development Programme on “Computing with Matlab and Latex Software: Indispensable Tools for Researchers” Math Tech Thinking Foundation (MTTF), India, 05-Jan-2022 to 11-Jan-2022.
- Three Days National Level Virtual FDP on “Graph Theory”, Department of Mathematics (CA), Vellalar College for Women, Erode, 21-Dec-21 to 23- Dec-21.
- Five day National Faculty Development Program on “Recent Trends and Challenges in Robotics and Automation (RTCRA-21)”, Department of Mechatronics Engineering, Manipal University, Jaipur, 13-Dec-21 to 17-Dec-21.
- Faculty Development Programme on “Framework for Internet of Things (IoT) Applications”, Center for Internet of Things (IoT), Dr. N. G. P. Arts and Science College, Coimbatore, 21- Sep–21 to 24-Sep–21 & 28- Sep–21 to 30- Sep–21.
- Online Faculty Development Programme on “Research Methodology and Pedagogy for Tertiary Education”, Dr. N. G. P. Arts and Science College, Coimbatore, 15 - Jun-21 to 21- Jun-21.
- Two Days Virtual Faculty Development Programme on "Teaching Learning Process Through Revised Blooms Taxonomy", Department of Mathematics, Dr. N. G. P. Institute of Technology, Coimbatore, 1 - Jul-21 to 2- Jul-21.
- Five Days Faculty Development Program on “Mathematical Tools” Department of Science and Humanities, Hindusthan College of Engineering and Technology, Coimbatore, 21-Jun-21 to 25-Jun-21.

- One Week Online Faculty Development Programme on “Matlab and Its Applications” organized by Department of Mathematics, Dr. N. G. P. Institute of Technology, Coimbatore, 07- Jun-21 to 12-Jun-21.
- Seven days International Faculty Development Program on “Industrial Revolution 4.0: Emerging Trends in Information Technology” School of Computer Science, PPG College of Arts and Science, 21-May-21 to 28-May-21.
- Five Day Faculty Development Program on “Research Management Analysis Tools and Technique” Research Cell & Department of Computer Science and Applications, Sankara College of Science & Commerce, Coimbatore, 24-May-21 to 28-May-21.
- Five Day Faculty Development Program on “MATLAB for Engineering and Scientific Computations”, B K Birla Institute of Engineering & Technology, Pilani, 22-Feb-21 to 26-Feb-21.
- Four-day Faculty Development Programme on “Applications of Mathematics in Engineering” (Series - IV) organized by the Department of Mathematics, KPR Institute of Engineering and Technology, Coimbatore, 25-Aug-20 to 28-Aug-20.
- Online Faculty Development Programme on “Appraisal of Mathematical Learning Outcomes in Cybergogy Environment” organized by the Department of Mathematics, Arul Anandar College (Autonomous), Madurai, 15-Jul-20 to 17-Jul-20.
- Seven days Faculty Development Programme on “NAAC Revised Accreditation Framework and OBE Assessment Methodology”, Dr. N.G.P. Arts and Science College, Coimbatore, 27-May-19 to 2-Jun-19.
- Online Faculty Development Program (FDP) on “Graph Theory – A Research View”, Nirmala College for Women, Coimbatore, 26-May-20.
- Faculty Development programme on “Real Life Applications of Fuzzy Mathematics” Organized by the Departments of Arts, Science & Management Studies, St.Peter’s Institute of Higher Education and Research, Chennai, 22-May-20.
- 5 Days Online Faculty Development Program (FDP) on “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.
- Faculty Development Program on “Documentation of Graph using LaTeX”, C Abdul Hakeem College of Engineering and Technology, Vellore, 13-May-20.

- Faculty Development Program on "Research Methodology", Bharathiar University Arts and Science College, Pollachi, 27-Apr-20
- One-week FDP Programme on Quality Initiatives in Higher Education, Consortium of Colleges, 13- Apr-20 to 20-Apr-20.
- Two Days Faculty Development Programme on Recent Advances in Mathematics, Department of Mathematics, Dr. N.G.P. Arts and Science College, Coimbatore, 2-Mar-20 to 3-Mar-20.

Conference / Seminar / Workshop Organized

- 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- Conference / Seminar / Workshop

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

Awards / Honors

Awards / Honors	Agency / Institute	Year of Award
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	2019-20 ODD Semester
Best Mentor	Dr. N.G.P. Arts and Science College, Coimbatore	2019-2020
Best Mentor	Dr. N.G.P. Arts and Science College, Coimbatore	2021-2022

