

FACULTY PROFILE

1. Name : Dr. Priya P.
2. Designation : Assistant Professor,
PG and Research Department of Mathematics
Auxilium College (Autonomous), Vellore – 632 006.
3. Qualification : M.Sc., M. Phil., SET., Ph.D
4. Mobile number : 73 73008653
5. E-mail id : priyap@auxiliumcollege.edu.in
6. Teaching Experience : 8 years
7. Area of specialization : Differential Equation, Numerical Analysis
8. Research Experience : 2 years
9. Projects Ongoing : 1 (Seed Money)
10. No. of Papers Published : 11 Research Articles
11. No. of Papers Presented in the National /
International/ Seminars/ Workshops/ Conferences : 7
12. No. of Seminars/Workshops/Conferences organized: 19
13. No. of Patents obtained: 2
14. Reviewer:
 - International Journal of Mathematics and Mathematical Sciences - Wiley Online Library
 - Modeling Earth Systems and Environment - Springer
15. Responsibilities held
 - Health and Fine Arts Club in charge (2018 to 2024)

- Mathematics Association (2022- 2025)
- Value Added Course - Instructor (2022-2023, 2024-2025)
- Mentor
- Online course coordinator of Spoken-Tutorial Project – IIT Bombay.
- Certificate course for level 2 through Spoken-Tutorial Project – IIT Bombay.

16. Current Responsibilities:

- DQAC Member
- AQAR In-charge
- Documentation

17. Membership in professional bodies:

- A lifetime member of the Academia for Advanced Research in Mathematics Society (AARM) (Reg. No. SRG/Vellore/96/2019)

18. Other bodies:

- NSF - International Eco Club Student Chapter (IECSC)

19. No. of Online Courses completed (Minimum of 4 Weeks): 5

20. Any Other:

- Nearly 26 PG Students finished their projects in their relevant subject areas under my guidance.
- **Granted Qualification approval (to hold the post) from the Thiruvalluvar University:**
No. TVU/R/Apprl.of.Qulfn./AC/2018/3467
Date: 27.12.2018
- **Computer Knowledge:** C, C++, Java, LATEX, MATLAB, R and SCILAB
- **Technical qualification:** Completed Junior Grade in Typewriting (English)

PUBLICATIONS

Publications in Journals

- **Priya P.** and Sabarmathi A., Caputo fractal fractional order of Soil Pollution model due to industrial and agrochemical- International Journal of applied and computational mathematics- Springer- Volume 8, article number 250, **ISSN: 2199-5796** (2022)
- **Priya P.** and Sabarmathi A., Uniform Asymptotic Stability of Sir Model with Distributed Delay: A Case Study of Nipah Virus- Mathematical Statistician and Engineering Applications, ISSN: 2094-0343, Dec 2022.
- **Priya P.**, Dynamic Efficacy of Soil Pollution using fractional order model- An Adomian Decomposition Approach, Tuijin Jishu/ Journal of Propulsion Technology, ISSN: 1001-4055, Vol. 44, No. 4, 2023. **Scopus index with IF: 0.65**
- **Priya P.**, Control Strategies for Fractional Order Soil Micro Plastic Pollution model and Preserving Nutrient Cycle Integrity, Multiscale and Multidisciplinary Modeling, Experiments and Design, **Springer**, Volume 7, Issue 1, Pages: 4589-4604 **Scopus Index with IF 2.2**
- **Priya P.**, Bifurcation and optimal control analysis of fractal fractional order Soil-Plant Interaction model, **Springer Proceedings in Physics**, 2024, Vol. 397. **Scopus Indexed.**
- **Priya P.**, “Optimal Control on ABC fractal fractional order model of microplastic pollution in soil and its effect on nutrient cycle”. Journal of Computational and Applied Mathematics, **Elsevier**, ISSN: 0377-0427 ,Volume 450, November 2024, 115997, **Scopus Indexed with IF 2.4.**
- **Priya P.**, “Novel adaptive control approach to fractal fractional order deforestation model and its impact on soil erosion”, **Scientific Reports**, Sci Rep 14, 27996, ISSN 2045-2322 **Scopus and SCI Indexed with IF 4.0.**
- **Priya P.**, “Fractional order Commensurate model of contaminated soil-plant interactions with non-singular kernel” International Journal of Computational and Applied Mathematics. **Springer**, Volume 10, article number 150, (2024), **ISSN: 2199-5796 Scopus Indexed with IF 1.91,**
- **Priya P.**, “Global Sensitivity analysis soil pollution using fractal fractional order model”, International Journal of Energy and Environment Science, **UGC Care List.**
- **Priya P.**, and Sabarmathi A., “Exploring Bifurcation and Optimal Control Dynamics in Caputo Fractional Soil-Plant Interaction Systems” –Dynamics of Continuous, Discrete and

Impulsive Systems Series A: Mathematical Analysis 32 (2025), 67-76. **Scopus Indexed with IF: 0.31.**

- P.R. Besi, G.M. Vijayalakshmi and **P. Priya**, “Covid-19 Dynamics With Time Delay Model Considering Super Immunity” Dynamics of Continuous, Discrete and Impulsive Systems Series A: Mathematical Analysis 32 (2025), 77-91. **Scopus Indexed with IF: 0.31.**

FDP's/ Seminars/ Workshops/Webinars

National/ International/Seminars/Workshops/Conference/Congress/Symposium/

Endowment Lecture/ Conclave attended: 10 (Offline)

- National seminar on the History of Ancient Mathematics as Culled out from Tamil Epigraphs and Literature- PG and Research Department of Tamil, Sacred Hearts College, Tirupattur. 26th and 27th February, 2019.
- One day National level seminar on Recent Trends in Discrete Mathematics-D.K.M College for Women, Vellore. -25th January, 2019.
- International Symposium On Recent Trends in Mathematical Sciences - VIT University, Vellore-15 and 16, July, 2019.
- National level Faculty development program on “Artificial Intelligence and computer vision using MATLAB and SIMULINK-Auxilium College (Autonomous), Gandhi Nagar, Vellore -26th September 2019.
- National conference on applied Mathematics and its applications-PG and Research Department of Mathematics, Sacred Heart College, Tirupattur- 6th and 7th February, 2019.
- International Seminar on Applied Mathematics (ISAM-2019)-Auxilium College (Autonomous), Gandhi Nagar, Vellore-19th July, 2019.
- State Level Intercollegiate Paper Presentation-Auxilium College, Vellore-October 20, 2022.
- International **Symposium** on Mathematical analysis of fractals and dynamical system-2023 (ISMAFDS2023)”- School of advanced sciences, Department of Mathematics, VIT, Vellore- 24th and 25th August, 2023.

- International Conference on “Youth for Earth: Restore and Protect our Environment”, Organized by Enviro Club of Auxilium College (A) in collaboration with Tamil Nadu Pollution Control Board, Vellore on 10th October 2024.
- National Level Workshop Hands-on Training on R Programming, Organized by PG and Research Department of Mathematics, Auxilium College (A), Vellore on 30th August 2024.
- State-Level Workshop on GeoGebra, Organized by PG and Research Department of Mathematics, Auxilium College (A), Vellore on 28th January 2025.

National/ International/Seminars/Workshops/Conference/Congress/Symposium/

Endowment Lecture/ Conclave attended: 55 (Online)

- One week National Level online **Faculty Development Program** includes training in R Language- PG and Research Department of Mathematics, Auxilium College(Autonomous), Vellore in collaboration with Spoken Tutorial Project IIT Bombay, Funded by National Mission of Education through ICT, MHRD, Govt. of India- 13th -20th May 2020
- Online **Workshop** on Mathematical Analysis (MATANA 2020)-PG and Research Department of Mathematics, Loyola College (Autonomous), Chennai-8th -13th June 2020.
- Two-day webinar on “Linear Algebra”-PG and Research Department of Mathematics, National College (Autonomous), Trichy-9th - 10th June 2020.
- **Webinar** on “Graphs from Commutative Rings”-Department of Mathematics, Presidency College(Autonomous), Chennai- 10th June 2020.
- **Webinar** on Introduction to the theory of Automata and its Applications- PG and Research Department of Mathematics, Queen Marys College(A), Chennai-11th June 2020.
- Five- Day **Webinar** series on “Outcome Based Education(OBE)”-IQAC, Sacred Heart College(Autonomous), Kochi, Kerala-11th,12th, 15th,16th and 17th June 2020.
- One day online **Webinar** on “Similarity Measure in Fuzzy Numbers and its Applications- Department of Science and Humanities, Dr. N. G. P Institute of Technology, Coimbatore- 13th June 2020.

- International **webinar** on Emerging Trends in Graph Theory”-PG and Research Department of Mathematics, Sacred Heart College(Autonomous), Tirupattur-14th – 16th June 2020.
- National Level **Webinar** on “Studies on Fuzzy Topological Space”-PG Department of Mathematics(SF), Rajapalayam Raju’s College, Rajapalayam-15th June 2020.
- Two day International **webinar** on “Recent Advances in Mathematics & Covid -19”- Department of Mathematics and Statistics and IQAC, St. Joseph’s College for Women(A), Andhra Pradesh-15th -16th June 2020.
- One week **FDP** on “Advanced Materials Research”-Department of Science and Humanities, Bharat Institute of Engineering and Technology, Hyderabad-15th -19th June 2020.
- International **Web Conference** on “Advances in Mathematics”-PG and Research Department of Mathematics, St. Mary’s College (Autonomous), Thoothukudi-17th -19th June 2020.
- Three days Online **Faculty Development Programme** on “Mathematical Modeling in Biomedical Engineering-2020”-Department of science and Humanities, Dr. N. G. P. Institute of Technology, Coimbatore-18th -20th June 2020.
- The Mathematics Live **webinar** on “SAGEMATH- Greatest way of Understanding Math”- Department of Mathematics, PSNA College of Engineering and Technology, Dindigul-18th June 2020.
- National **Webinar** on Fuzzy Applications-PG and Research Department of Mathematics, St. Joseph’s College of Arts and Science (Autonomous), Cuddlore-18th June 2020.
- **Webinar** on “Basic Author Workshop Research Article Writing and Reference Management Using Mandalay”-Faculty of Science, Annamalai University in collaboration with ELESVIER-22nd June 2020.
- **Webinar** on Mathematical Modelling Perspectives for prediction of spread and control strategies for COVID- 19-Department of Mathematics, JIWAJI University, Gwailor-24th June 2020.
- National **Webinar** on “Coloring of Graphs”-Department of AS&H (Mathematics), Tirumala Engineering College, Andhra Pradesh-26th June 2020.

- National **Webinar** on “Fascinating world of Mathematics and its applications to blood flows”-Department of Mathematics, Siddartha College of arts and science, Vijayawada-27th June 2020.
- National **Webinar** on “Differential Equation and Applications”-Department of H&S (Engineering Mathematics), Malla Reddy Institute of Technology and Sciences, Secundarabad, Telegana-28th June 2020.
- One day **Webinar** on Recent Trends in Mathematics-Department of Computational Science and Humanities, Indian Institute of Information Technology, Kottayam, Kerala-29th June 2020.
- One Week International Online **Faculty Development Programme** on “Applications of Mathematics in Science and Engineering”-Department of Basic Science (Mathematics), Vishnu Institute of Technology, Bhimavaram-7th – 11th July 2020.
- National **Webinar** on “Queer Studies in India: Some Reflections”-Department of English associate with Voluntary Health Services, Chennai, an event registered with san Diego Pride, California, A.P.C. Mahalaxmi College For Women, Thoothukudi.-13th July 2020.
- National **Webinar** on “CSIR NET Mathematics”-PG and Research Department of Mathematics, Sengunthar arts and science college, Namakkal-15th July 2020.
- Three day **FDP** on “Experts of Research Methodology and Processes”-Research and Development, Tirumala Engineering College, Guntur, Andhra Pradesh.-20th – 22nd July 2020.
- International online **FDP** on” DIGITAL TOOLS FOR RESEARCHERS AND ICT ONLINE TOOLS IN TEACHING”-PG and Research Department of Mathematics Hindusthan innovative learning Hub, Hindusthan College of Arts and Science-Coimbatore-20th -24th July 2020.
- National level one week confederated online **Faculty Development Program** on “Orienting Applications and Conceptualized aspects of Sciences and Humanities” - Department of Humanities and Science, Balaji Institute of Technology and Science, Telangana-21st – 25th July 2020
- National **conference** on “Mathematical Analysis and Computing (NCMAC-2021)”-Sree sevugan Annamalai College-Department of Mathematics, Sivagangai-May 28, 2021.

- National level **Webinar** on “Mathematical Software workshop”-Universal Engineering College, Department of applied sciences and Humanities, Kerala-June 02-06, 2021
- **Webinar** on ‘How to handle online classes effectively?’-VIT University, School of social sciences and Language, Chennai-June 10, 2021.
- **Webinar** on “ Role of Preservatives in Nutritional Industry’-Nehru Arts and Science College, Centre for skills developments and Entrepreneurship cell, Coimbatore-July 03, 202.
- **Webinar** on “Emerging Research Topics in Mathematics”-Auxilium College, Department of Mathematics, Vellore-October 1, 2021.
- One day International **Webinar** on “Multiplicative inverse Functional Equations and their Applications”-St. Joseph’s College of Arts and Science (Autonomous), Cuddalore-October 29, 2021.
- **Workshop** on “Documentation and Data Management”-IQAC, Auxilium College, Vellore- October 29, 2021.
- **Webinar** on “Research Trends in Mathematics”-PG and Research Department of Mathematics, Auxilium College, Vellore-December 1, 2021.
- **Webinar** on “Amazing Analysis”-Department of Mathematics and Computer Application, Dwaraka Doss Goverdhan Doss Vaishnav College, Chennai-December 18, 2021.
- **Workshop** on “Numerical and Analytic techniques in Engineering problems”-Department of Mathematics, SRM University, Chennai-January 19-21, 2022
- **Webinar** on “Developing Mathematical Thinking”-PG and Research Department of Mathematics, Auxilium College, Vellore-January 27, 2022.
- **Webinar** on “ Graph theory emerging in the field of computer science”-PG and Research Department of Mathematics, St. Joseph’s College of Arts and Science, Cuddalore-March 23, 2022.
- **FDP** on LibreOffice Suite Writer 6.3-Spoken Tutorial IIT Bombay-June 15, 2022.
- **FDP** on LibreOffice Suite Calc 6.3-Spoken Tutorial IIT Bombay-June 17, 2022.
- **FDP** on Libre Office Suite Impress 6.3-Spoken Tutorial IIT Bombay-June 18, 2022.
- **Webinar** on Excellence in Teaching, Training and Research-Bharat Institute of Engineering and Technology, Centre for Research and Development in Education and Social Interpretation and Indian Ceramic Society, Hyderabad-July 23, 2022.

- **Webinar** on Innovations in Materials Processing: Importance of Ceramic Shell moulds for investment casting of Gas Turbines Components-Bharat Institute of Engineering and Technology, Centre for Research and Development in Education and Social Integration and Indian Ceramic Society, Hyderabad-August 20, 2022.
- Five days National Level **Faculty development program** on Recent advances in Mathematics -VIT University, Vellore-August 8-12, 2022.
- **Workshop** on “Graph Theory using Python-VIT University, Vellore-September 3, 2022.
- One Week International **FDP** on “Mathematics in Real, Applied and Computational Domains”-Department of Mathematics, School of Science and Humanities, Sathyabama Institute of Technology, Chennai- 3rd -8th July, 2023.
- International **webinar** on “Application of MATLAB”- Department of Mathematics and Statistics, St. Francis College, Koramangala, Bengaluru- July 13, 2023.
- One International **workshop** on “Exploring molecules Via Graph theory”- School of advanced sciences, Department of Mathematics, VIT, Vellore-8th September, 2023.
- One Day National Seminar on “Recent Trends in Applied Mathematics – R, Organized by Sridharacharya Academy of Mathematical Sciences, Midnapore, West Bengal, India on 22nd September 2024.
- “A Five-Day National Level Online FDP on Beyond Boundaries: Driving Innovation in Research”, Organized by Committee for Research Ethics, Publication and IPR, Auxilium College (A), Vellore in collaboration with North East Institute of Social Sciences and Research, Nagaland on 26th – 30 December 2024.
- Five-Day Online Faculty Development Programme on “Research in Mathematics: Present Trends and Future Prospects”, Organized by PG and Research Department of Mathematics, Sacred Heart College (Autonomous), Tirupattur on 18th -22nd November, 2024.
- Five-Day Faculty Development Programme on “Mathematical Foundations of Artificial Intelligence and Machine Learning”. Organized by PG and Research Department of Mathematics, Sacred Heart College (Autonomous), Tirupattur on 3rd – 7th February, 2025.
- One Day National Webinar on “Mathematical Modeling and Applications”, Organized by Department of Mathematics and Internal Quality Assurance Cell (IQAC) on 20th February, 2025.

Online course studied in Coursera and NPTEL: 5

1. Programming for everybody (Getting started with Python) Coursera, University of Michigan-**7 weeks**.
2. Introduction to ordinary differential Equation-Coursera, KAIST-**9 weeks**.
3. Introduction to Programming in MATLAB-Coursera, Vanderbilt University- **9 weeks**.
4. Ordinary and Partial differential equation with Applications-NPTEL, IIT Roorkee-**12 weeks**.
5. Introduction to Abstract and Linear Algebra-NPTEL, IIT Kharagpur-**8 weeks**.