

## Curriculum Vitae

**Name (with Qualification):** Dr.C.Yuvarani, M.Sc., M.Phil., Ph.D.

**Designation:** Assistant Professor

**Department:** Mathematics

**Year of Experience:** 15 years

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### Knowledge of Software:

- MATLAB, R and Python

### Research Interests:

- Advanced Optimization Techniques
- Machine Learning
- Fuzzy Systems
- Graph Theory

### Research Paper Publications:

- Published a paper titled “Matrix - Based Encryption: A Python – Driven Approach to Data Protection” in 2025 Multimedia University Engineering Conference (MECON), IEEE Xplore (Scopus Indexed), Malaysia  
DOI: 10.1109/MECON67253.2025.11276910
- Published a paper titled “Blended mode of Teaching and Learning Process” in SIRJANA Journal (UGC Care List), Volume 54, Issue 2, pages - 1 to 12, 2024.
- Published a chapter titled “Artificial Neural Network Approach in Design of Queueing Models” in the book Stochastic Processes and Their Applications in Artificial Intelligence, IGI Global publication, Chapter 3, pages - 23 to 38, July 2023. (Scopus Indexed)
- Published a paper titled “Simulation of Batch Arrival Queueing Model Using Artificial Neural Network” in the journal PURAKALA (UGC Care List), Vol. 32, Issue 1, pg.280-286, 2023.
- Published a paper titled “Journal of Combinatorial Mathematics and Combinatorial Computing” in Journal of Combinatorial Mathematics and Combinatorial Computing, Vol. 112, pg.193-212. (Scopus Indexed).
- Published a paper titled on “Analysis of multistage  $M^{[X]}/G^K/1$  queue with different server’s interruptions and its application in energy consumption”, International Journal of Ambient Energy, p-ISSN: 0143-0750, Published online. (2018) (Scopus Indexed).
- Published a paper titled on “Multistage  $M[X]/G(K)/1$  queue with unreliable Server having Multiple Vacation and Reneging”, Journal of Advanced Research in Dynamical & Control Systems, Elsevier, ISSN 1943-023X, Volume 10, Issue 1, pp.343-348;(2018). (Scopus Indexed).

- Published a paper titled on “M[X]/G/1 Multistage Queue with Stand-by Server During Main Server’s Interruptions”, Indonesian Journal of Electrical Engineering and Computer Science, p-ISSN: 2502-4752, e-ISSN: 2502-4760, Volume 11, Issue 1, pp.275-283;(2018). (Scopus Indexed).
- Published a paper titled on “M[X]/G/1 Multistage Queue with Reneging During Vacation and Breakdown Periods and Second Optional Repair”, International Journal of Pure and Applied Mathematics, p-ISSN: 1311-8080, e-ISSN: 1314-3395, Volume 109, Issue 7, pp.59-66;(2016). (Scopus Indexed)
- Published a paper titled on “Multistage Batch Arrival Queue with Different Server Vacations having Restricted Admissibility and Reneging”, Global Journal of pure and Applied Mathematics, ISSN 0973-1768, Volume 12, Issue 3, pp.445-449;(2016), (Scopus Indexed).

### **International / National Conference Presentation:**

- Presented a paper in the National Conference on Emerging Trends in Mathematics & Applications in Engineering and Technology, Hindustan Institute of Technology and Science titled on “Design and Analysis on General Bulk Queueing Model and its Applications”, 2018.
- Presented a paper in the International Conference on Mathematical Computer Engineering, VIT University titled on “Design of Bulk Queueing Model for Toll Plaza”, 2018.
- Presented a paper in the International Conference on Mathematical Methods, Modelling and Simulation in Chemical Sciences, SSN College of Engineering titled on “Transient Analysis of Multistage M[X]/G(K)/1 Queueing Model Equipped with Stand-by Server”, 2018.
- Presented a paper titled “Simulation of Batch Arrival Queueing Model Using Artificial Neural Network” in the International Conference on Research Trends in Contemporary Mathematics (ICRTCM 2023) conducted by P.G and Research Department of Mathematics, Patrician College of Arts and Science, Chennai & Sacred Heart College, Tirupattur from 03.02.2023 to 04.02.2023.
- Presented a paper titled “The Virtue of Mathematical Genius: Srinivasa Ramanujam” in the International Conference organised by Department of Tamil, DRBCCC Hindu College, Pattabiram on 11.03.2025.
- Published a paper titled “Graph Theory-Based Encryption Using Vertex Odd Mean Labeling and Topological Indices” in the proceedings of Two Days International Conference on Advances in Applied Sciences, Technology & Mathematics (ICAASTM-2025) organised by IQAC, Department of Computer Science & Mathematics, Shri Krishnaswamy College for Women, Chennai - 600040 & MIT Square London from 20.02.2025 to 21.02.2025. (ISBN: 978-93-342-2017-9)
- Presented a paper in the 2<sup>nd</sup> International Conference on Emerging Frontiers in Nonlinear Complex Systems, Computational Intelligence and their Applications (ICNCS 2025) titled on “Dynamic Small-World Graphs for Quantum-Resistant Stream Cipher Encryption” conducted by Vellore Institute of Technology, Chennai from 08.10.2025 to 10.10.2025.

### **FDP / Webinar / Workshop Participation**

- Attended a MATLAB Workshop for Engineering Applications at VIT University, Chennai.
- Participated in two days FDP on “Basics of R programming” from June 4 – 5, 2020 conducted by department of Mathematics, Sree Narayana Guru College, Coimbatore.
- Participated in “Skillset for Effective Classroom Teaching” on 23<sup>rd</sup> May 2020 organised by R.M.K Engineering College, Chennai.
- Participated in “Essential Mathematics for Engineering Research” on 16.05.2020 organised by Kings College of Engineering.
- Participated in “Fuzzy Logic and its Application” on 29<sup>th</sup> May 2020 organised by department of Science and Humanities, SRM TRP Engineering College, Trichy.
- Participated in “Fuzzy Sets Vs. Crisp Sets” on 06.06.2020 organised by Department of Mathematics, Arasu Engineering College, Kumbakonam.
- Participated in workshop on “Mathematical Sciences for CSIR – NET / SET / GATE” from May 11 – 15, 2020 conducted by Department of Mathematics, Sree Narayana Guru College, Coimbatore
- Participated in National Level FDP on “Emerging Trends in E-Learning” organised by Department of English, Universal School of Administration, Bengaluru held on 29<sup>th</sup> Jan 2022.
- Participated in “Five days National Webinar Series on Techniques in Education” from 24.05.2021 to 28.05.2021 organised by Skill Development Center, Tamil Nadu Teachers Education University, Chennai in association with Lakshmi College of Education, Gandhigram, Dindigal.
- Participated in One day Workshop on “Online Learning Self-Assessment” organised by North-Eastern Hill University (NEHU), Shillong, Meghalaya on 24<sup>th</sup> June 2021.
- Participated in workshop on “Applications and Recreational Problems in Graph Theory” organised by Department of Mathematics, Kongunadu College of Engineering and Technology, Trichy, Tamilnadu on 20<sup>th</sup> January 2022.
- Participated in National Webinar on “Modelling and Solving Graph Colouring Using GRIN Software” organised by PG & Research Department of Mathematics, Theivanai Ammal College for Women, Villupuram on 26<sup>th</sup> May 2021.
- Participated in Five-days International Faculty Development Program on “Advanced Research and Quality Paper Publishing” organised by IQAC and Department of Mathematics, Shri Krishnaswamy College for Women, Chennai from 19.12.2022 to 23.12.2022.
- Participated in Five-days Faculty Development Program on “Algorithmic Graph Theory” organised by Division of Mathematics, School of Advanced Sciences (SAS), Vellore Institute of Technology, Chennai from 26.12.2022 to 30.12.2022.
- International Webinar on “Applications of Machine Learning Techniques” organised by Department of Statistics and Applied Mathematics, School of Mathematics and Computer Sciences, Central University of Tamil Nādu during 25-26 April 2022.
- Participated in IP Awareness/Training program under ‘National Intellectual Property Awareness Mission’ organised by Intellectual Property Office, India on Jan 4, 2023.

- Participated in Five-days Faculty Development Program on “Complex Geometry & Cryptosystems” organised by Mathematical Sciences Institute, Belagavi from 20.04.2024 to 24.04.2024.
- Participated in Five-days Faculty Development Program organised by organised by IQAC of DRBCCC Hindu College in collaboration with Centre for Education Beyond Curriculum (CEDBEC) CHRIST, Bengaluru from 12.06.2023 to 16.06.2023.
- Participated in Five days National Level Virtual Workshop on “Advanced Study in Differential Equations, Cryptography and Non-Monotone Continuous Functions” organised by IQAC & Math Versatile Club of Department of Mathematics, Shri Krishnaswamy College for Women during 21-25 August 2023.
- Participated in one day Faculty Development Programme on GATE & Jam 2025 Examinations organized by GATE – Jam Office, IIT Madras on 31.08.2024
- Participated in one-week International Faculty Development Program on “Innovative Applications of Mathematics” organised by the Department of Mathematics, Bapatla Engineering College, Bapatla from 18.11.2024 to 23.11.2024
- Participated in the National Webinar on “Fractional Calculus: Extension and Applications” organised by the Department of Mathematics in association with Patrician Research Centre and IQAC, Patrician College of Arts and Science, Chennai on 14<sup>th</sup> September, 2024.
- Participated in the Five-Day Faculty Development Programme on “Enhancing Student Engagement through Active Learning and Teaching” organised by the IQAC of DRBCCC Hindu College in collaboration with Academic Staff College of Dr.M.G.R. Educational Research Institute from 26.05.2025 to 30.05.2025.
- Participated in one-week Tamil Nadu Government Skill Development Corporation, Naan Mudhalvan Faculty Development Program on “Microsoft Digital Skills - Microsoft” organised by Sridevi Arts and Science College, Ponneri, from 23.06.2025 to 28.06.2025.
- Participated in One-day Faculty Training Programme on “GATE 2026 and JAM 2026 Examination Awareness Session” organized by GATE – Jam Office, IIT Madras on 23.08.2025.
- Participated in the One Week International Faculty Development Program on “Innovative Applications of Mathematics (IAM – 2025)” organised by the Department of Mathematics in association with Institution’s Innovation Council (IIC), Bapatla Engineering College, held from 17.11.2025 to 22.11.2025 through virtual mode.
- Participated in Five Days National Level Virtual Faculty Development Program on “Graph-Based Optimization and Statistical Analysis Using Scilab and Python” organised by Department of Mathematics, Rathinam College of Arts and Science, Coimbatore, in collaboration with the Department of Mathematics, Dhanalakshmi Srinivasan College of Arts and Science for Women, held from 16.02.2026 to 20.02.2026.

**Induction Program Participation:**

- Attended induction program on “Faculty in Universities / Colleges / Institutes for higher education” from June 4 – July 1, 2020 conducted by Teaching Learning Centre, Ramanujan College, University of Delhi.
- Participated in Training cum orientation program conducted by Department of English and Foreign languages and Department of linguistics, Bharathiyar University association with TANSCHER on 30<sup>th</sup> Sep 2020.
- Participated in UGC Sponsored Ninth Faculty Induction Programme organised by HRDC, Pondicherry University from 03.11.2022 to 02.12.2022.

### **Refresher Course Participation**

- Participated in the “Refresher Course in Mathematics & Statistics” organised by UGC – MMTTC, Patna University, Patna from 14.10.2024 to 26.10.2024
- Participated in the “Refresher Course on Innovations through Mathematics: Practical Insights and Applications (online)” from 01.12.2025 to 13.12.2025 organised by UGC - Malaviya Mission Teacher Training Centre (MMTTC), University of Rajasthan, Jaipur.

### **Workshop Organised**

- Organised One day Workshop on “Design Thinking and Business Ideation” on behalf of IIC on 03.02.2025

### **Guest Lecture**

- Delivered a talk on “Importance and Scope of Mathematics” at the Students Induction Programme held on 22.08.2022 in DG Vaishnav College, Chennai.
- Invited as a resource person by Bhaktavatsalam Memorial College for Women to deliver a talk on “Topics on Statistics” on 21.12.2024
- Invited as a resource person by Bhaktavatsalam Memorial College for Women to deliver a talk on “Mathematical Foundation for Machine Learning & AI” on 07.08.2025

### **Other Activities**

- Completed 8 weeks NPTEL course on “Fuzzy Logic and Neural Networks”, Feb – Apr 2023.
- Completed 12 weeks NPTEL course on “Essential Mathematics for Machine Learning”, Jul – Oct 2023.
- Completed 12 weeks NPTEL course on “Data Analytics with Python”, Jan – Apr 2024.