

Dr. S. A. Josephine

Assistant Professor, Department of Science and Humanities
Loyola-ICAM College of Engineering and Technology (LICET),
(Autonomous)
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Education

- **Ph.D.** in Mathematics, Anna University, Chennai, 2024
Thesis: “A Study on Discrete Time Retrial Queueing Models with Customer Displacement, Feedback and Server Vacation”
- **M.Phil.** in Mathematics – 91% (First Class with Distinction), Loyola College, University of Madras, 1999
- **M.Sc.** in Mathematics – 74% (First Class), Stella Maris College, University of Madras, 1998
- **B.Sc.** in Mathematics – 72% (First Class), Stella Maris College, University of Madras, 1996

Teaching Experience

- **Assistant Professor**, Department of Science and Humanities, Loyola-ICAM College of Engineering and Technology (LICET) (July 2011–present)
- **Assistant Professor**, Department of Mathematics, R.M.K. Engineering College, Kavaraipettai (October 2000–May 2011)
- **Lecturer**, Department of Mathematics, Sri Ram Engineering College, Veppampattu (November 1999–October 2000)

Academic Responsibilities

- Student Induction Programme – Coordinator (2013 - 2024)

Administrative Responsibilities

- Head, Department of Science and Humanities, LICET (July 2018 – June 2024)
- Head, Department of Mathematics, LICET (July 2013 – June 2017)

Research and Academic Projects

- Doctoral research on “Discrete Time Retrial Queueing Models with Customer Displacement, Feedback and Server Vacation” – Anna University (2014–2024)

Publications and Book Chapters

Journals (International):

- S. A. Josephine, “An N-policy M/M/1 Queueing Model for Energy Saving Mechanism in Networks,” *Sustainable Computing: Informatics and Systems*, Science Direct, ISSN: 2210-5379, December 2024. DOI: [10.1016/j.suscom.2024.101016](https://doi.org/10.1016/j.suscom.2024.101016)
- S. A. Josephine, “Life Time Elongation of Wireless Sensor Networks Using Discrete Time Queues with Vacation Control,” 2022.
- S. A. Josephine, “Analysis of an M/G/1 Retrial Queue with Second Optional Service and Customer Feedback, under Bernoulli Vacation Schedule,” *Malaya Journal of Matematik*, Vol. 7, No. 4, pp. 795–807, 2019.

- S. A. Josephine, S. Pavai Madheswari, “Analysis of Discrete Time Geo/G/1 Retrial Queue with Customer Displacement and Feedback,” *Journal of Advanced Research in Dynamical & Control Systems*, Vol. 11, 12-Special Issue, 2019.
- S. A. Josephine, S. Pavai Madheswari, P. Suganthi, “Retrial Queueing System with Retention of Reneging Customers,” *International Journal of Pure and Applied Mathematics*, Vol. 106, No. 5, pp. 11–20, ISSN: 1311-8080, 2016. DOI: [10.12732/ijpam.v106i5.2](https://doi.org/10.12732/ijpam.v106i5.2)

Conference Papers:

- S. A. Josephine, S. Pavai Madheswari, “Analysis of Discrete Time Retrial Queueing Model with Changes in Vacation Times for Energy Saving in WSNs,” September 2018.

Areas of Interest

By Research: Queueing Theory, Retrial Queues, Stochastic Processes, Operations Research

By Teaching: Engineering Mathematics, Transforms & PDEs, Discrete Mathematics, Linear Algebra, Ordinary Differential Equations, Probability & Statistics

By Experience: Department Administration, Outcome-Based Education, Jesuit Pedagogy (ICAM)

Software Skills

- Document Preparation: L^AT_EX, WordPress
- Platforms & LMS: MOODLE, Google Workspace
- Programming: MATLAB

Invited Talks

- “Applications of Ordinary Differential Equations” – Alpha Arts and Science College, December 2018
- “Applications of Matrices” – Alpha Arts and Science College, July 2017

Conferences Organised

- Member International conference on Next-Gen Mathematical Sciences, Loyola College, 10th and 11th December 2025

Conferences Attended (National / International)

International Conferences

- Re-envisioning Higher Education in India: Excellence, Equity & Sustainability (2025)
- International conference on Next-Gen Mathematical Sciences, Loyola College (2025)
- Engineering Response to Climate Change – LICET (2016)
- ICMAA-2014 – University College of Villupuram (2014)

National Conferences / Orientations

- FDP for Student Induction – Panimalar Engineering College (2019)
- Bridge Course Orientation – Anna University (2014)

Paper Presentations

- 2019 “Analysis of Discrete time Geo/G/1 Retrial Queue with Displacement and feedback” – AOSM’19, BITS Pilani, Rajasthan
- 2018 “A Geo/G/1 Discrete-Time Retrial Queue with Displacement and Change of Vacation times” – ICPAM - 2018, Sri Chandrasekharendra Saraswathi Viswa Maha Vidyalaya, Kanchipuram, Tamilnadu
- 2018 “A Geo/G/1 Discrete-Time Retrial Queue with Displacement, Impatience and Bernoulli Feedback” – ICAAM -2018, NIT Trichy
- 2018 “Analysis of Discrete Time Geo/g/1 Retrial Queue with Displacement and Feedback” – IC-CPS’18, RMKEC, Kavaraipettai
- 2016 “Analysis of an M/G/1 Retrial Queue with Second Optional Service and Customer Feedback” – ICMCE, VIT Chennai

Workshop / FDP: Organised

- Organiser – Workshop on “Teaching Mathematics for Engineering Students: Series – Transforms & PDE”, LICET, June 2017
- Coordinator – Workshop on “Teaching Mathematics for Engineering Students”, LICET, October 2015

Workshop / FDP: Attended

Year	Title / Organizer
2025	“AI in Pedagogy and Scientific Writing” – MCC College, Tambaram (6 days)
2025	“The Role of Data Science in Computational Mathematics & Statistics” (Online, 5 days)
2025	IFDP RTAM-2025 (Online, 7 days)
2025	Google Certified Educator – Level 1 (Online)
2025	Google Certified Educator – Level 2 (Online)
2024	“Teaching Learning Methods by PALs & TLC” – IIT Madras (3 days)
2024	“Application of Mathematics in Engineering and Artificial Intelligence” (Online)
2021	Certificate Course in “Digital Teaching Techniques” – ICT Academy & Atos Syntel (6 days)
2021	“Outcome-Based Education” (Workshop)
2021	“Stochastic Modeling and Computational Techniques” (Seminar)
2020	“Frontiers of Mathematics” – SRMIST, Ramapuram (FDP)
2020	“Advanced Concepts for Developing MOOCs” – MHRD
2020	“Managing Online Classes and Co-creating MOOCs” – MHRD
2020	“Applications of Mathematics” – Karunya Institute of Technology and Sciences
2020	“Recent Trends in Computational Mathematics” – MSAJCE, Chennai
2020	“Evolution of Teaching-Learning Process Post-Covid” – BIHER, Chennai
2020	“Effective Project Proposal Writing” – Velammal Engineering College
2020	“MATLAB Workshop with Applications to Linear Algebra” – BIT, Bengaluru
2020	“Statistical Data Analysis and Interpretation using SPSS” – Special Minds
2020	“Basics of Documentation using L ^A T _E X” – Stella Maris College, Chennai
2020	“Plotting 2D and 3D Graphs and Solving Equations Using MATLAB”, June
2020	“Invitation to Complex Analysis” – Department of Mathematics, Pioneer Kumaraswamy College
2020	“New Directions in Applied Science and Technology” – Arunai International Research Foundation
2020	“Effective project proposal writing” – Velammal Engineering College, Surapet
2019	“Short Term Training Programme on NBA Accreditation” – LICET
2019	“FDP for Student Induction (FDP-SI)” – Panimalar Engineering College
2018	IITB-201X: “Pedagogy for Online and Blended Teaching-Learning Process” – IIT Bombay
2018	IITB-101X: “Foundation Program in ICT for Education” – IIT Bombay

2017	HR Formation – ICAM Ignatian Training and Learning Process, ICAM, France
2016	“Discrete Mathematics & Graph Theory” – KCG College of Technology, Chennai
2014	FDP on “Signals and Systems” – LICET (11 days)
2012	“Aakash for Education” – LICET

MOOCs Course Details

- Advanced concepts for developing MOOCs, July 2020, MHRD
- Managing online classes and cocreating MOOCs, May 2020, MHRD
- IITB-201X – “Pedagogy for Online and Blended Teaching-Learning Process” (IIT Bombay)
- IITB-101X – “Foundation Program in ICT for Education – Autumn 2018” (IIT Bombay)
- ARISE ToT Master Coach (Trainer Tribe)

Any Other Details

- Trainer - Loyola Summer Camp 2024
- Core Team Member - Loyola Summer Camp 2023
- Core Team Member - Loyola Summer Camp 2021
- **Research Profiles:**
 Google Scholar: scholar.google.com | Scopus Author ID: 60578267300 | ORCID: 0000-0002-6312-767X | ResearchGate: [Josephine-Sundararaj](#) | Web of Science: MFI-6896-2025