

FACULTY PROFILE

1. Name : Dr. J. Jesintha Rosline
2. Designation : Assistant Professor
3. Qualification : M. Sc., M. Phil, PGDCA, Ph.D.
4. Mobile number 9841958938
5. E-mail id : jesi.simple@gmail.com
jesinthamaths@auxiliumcollege.edu.in
6. Teaching Experience : 12 Years
7. Area of specialization : Fuzzy Mathematics, Decision Making, Graph Theory and Fuzzy Graph Theory

8. Positions Held In Auxilium College:

- IQAC Member (2023 – Till Date)
- PARAMASH Member(2019 – Till Date)
- Coordinator - Staff Welfare Fund(2019- Till Date)
- Coordinator - Value Added Course (2022-Till date)
- Faculty Organizer and Invigilator of the online courses offered by Spoken Tutorial- IIT Bombay (2020-Till date)
- Mentor - I B.Sc. Mathematics (2019 – Till date).
- NIRF Coordinator (2023 – 2024)
- Research Ethics, Publication & IPR - Member(2020-2023)
- NIRF Member (2019-2023)
- Staff In-charge - Department AIIC(2022-2023)
- Staff in charge - Department Log Book(2022-2023)
- Staff in charge - Department NIRF (2020-21)
- Staff In charge - Mathematics Association (2020-21)

9. Research Experience and Guidance

S. No.	Name of the Scholar	Part time/ Full time	Admitted Year	Completed Year
1.	Anthoni Amali A.	Full Time	2021	2024
2.	Aruna G.	Part Time	2021	2025
3.	Divya V.	Part Time	2023	Pursuing
4.	Yamuna S.	Part Time	2024	Pursuing
5.	Janani J.	Part Time	2024	Pursuing

10. Projects Completed / Ongoing :

Title of the Project	Name of the Funding Agency	Duration	Remarks
Seed Money Project for Alternate Quadra Sub – Merging Polar Fuzzy Soft Graph and its Mathematical Implementations.	Auxilium College(Autonomous), Vellore	2 Yrs	Completed in 2024

11. No. of Papers Published : 28 + Book Chapter: 5

12. No. of Papers Presented in the National/ International/ Seminars/ Workshops/ Conferences : 11

13. No. of Seminars/Workshops/Conferences organized: More than 14

14. Membership in professional bodies :

- Life Time Membership in Academia for Advanced Research in Mathematics (AARM).

15. Other bodies :

- Membership in Nature Science Foundation (NSF).

16. Honors & awards received :

- “REV. FR. RACINE S.J., AWARD” for the best Researcher in the Academic Year 2015 – 2016.

17. No. of Online Courses completed : 4

18. Any Other (Descriptive):

PUBLICATIONS

Publications in Journals

1. Jesintha Rosline J., and Pathinathan T., "A Study on Stress Experienced by students and teachers in professional courses using Induced Linked Fuzzy Relational Mapping(ILFRM) Analysis ", *International journal of computing algorithm*, ISSN: 2278-2397, June 2013, Vol. 02, Issue 1, pp. 40-42.
2. T. Pathinathan and J. Jesintha Rosline, "Characterization of fuzzy graphs into different categories using arcs in fuzzy graph", *Journal of Fuzzy set valued analysis*, ISSN:2193-4169, 2014 (2014), pp. 1-6.
3. T. Pathinathan and J. Jesintha Rosline, "Double layered fuzzy graph", *Annals of Pure and Applied Mathematics*, ISSN: 2279-087X (P), 2279-0888 (O) 2014, Vol. 8, Issue 1, pp. 135-143.
4. T. Pathinathan and J. Jesintha Rosline, "Matrix Representation of Double layered fuzzy graph and its properties", *Annals of Pure and Applied Mathematics*, ISSN: 2279-087X (P), 2279-0888(O), 2014, Vol. 8, Issue 2, pp. 51 – 58.
5. T. Pathinathan and J. Jesintha Rosline, "Vertex degree of Cartesian product of Intuitionistic fuzzy graph", *International Journal of Scientific and Engineering Research* ISSN 2229-5518, March 2015, Vol. 6, Issue 3, pp. 224 – 227.
6. J. Jesintha Rosline and T. Pathinathan, "Intuitionistic Double Layered Fuzzy Graph and its Cartesian Product Vertex Degree" *International Journal of Computing Algorithm*, ISSN: 2278 – 2397, 2015, Vol. 4, pp. 1374 – 1378.

7. J. Jesintha Rosline and T. Pathinathan, "Intuitionistic Double Layered Fuzzy Graph", *ARPN Journal of Engineering and Applied Sciences*, ISSN 1819-6608, 2015, Vol. 10, Issue 12, pp. 5413- 5417.
8. J. Jesintha Rosline and T. Pathinathan "Structural Core Graph of Double Layered Fuzzy Graph", *International Journal of Fuzzy Mathematical Archive*, ISSN: 2320-3242(P), 2320-3250(O), 2015, Vol. 8, Issue 2, pp. 59-67.
9. T. Pathinathan, J. Jon Arockiaraj and J. Jesintha Rosline, "Hesitancy Fuzzy Graphs" *Indian Journal of Science and Technology*, ISSN: 0974-6846(P), 0974-5645(O), 2015, Vol. 8, Issue 35, pp. 1-5.
10. J. Jesintha Rosline, J. Jon Arockiaraj and Regina B, "Intuitionistic Double Layered Fuzzy Planar Graph", *International Journal of Current Advanced Research*, ISSN: 2319-6505(P), 2319-6475(O), 2018, Vol. 7, Issue 1, pp. 69 – 75.
11. J. Jesintha Rosline and E. Mike Dison, "Symmetric Pentagonal Fuzzy Numbers", *International Journal of Pure and Applied Mathematics*, ISSN: 1311-8080 (P), 1314- 3395 (O), 2018, Vol. 119, Issue 9, pp. 245-253.
12. J. Jesintha Rosline and T. Pathinathan, "Different types of products on Hesitancy Fuzzy Graphs", *International Journal of Pure and Applied Mathematics*, ISSN: 1311-8080 (P), 1314-3395 (O), 2018, Vol. 119, Issue 9, pp. 255-265.
13. A. Kirupa, J. Jesintha Rosline and T. Pathinathan, "Balanced k-Partitioned Fuzzy Graph", *International Journal of Innovative Technology and Exploring Engineering (IJITEE)*, ISSN: 2278-3075 (O), 2019, Vol 9, Issue 2, pp. 269 – 275.
14. A. Kirupa and J. Jesintha Rosline, "Domination in double layered fuzzy graphs", *AIP Conference Proceedings*, 0094-243X (P) 1551-7616 (O) 2019, Vol. 020117, pp. 1-7.
15. Anthoni Amali A. and J. Jesintha Rosline, "Alternate Quadra Sub - Merging Polar Fuzzy Soft Graph and its Application", *Reliability: Theory & Applications*, ISSN 1932-2321, 2023, Vol. 18, Issue 3(74), pp. 97 – 112.
16. Anthoni Amali A. and J. Jesintha Rosline, "Oscillating Polar Fuzzy Graph(OPFG) and its Applications" *AIP Conference Proceedings* 2842, 0094-243X (P) 1551-7616 (O), 2023, pp. 1-18.
17. G. Aruna and J. Jesintha Rosline, "Prism Fuzzy Number and Its Applications", *AIP Conference Proceedings* 2842, 0094-243X (P) 1551-7616 (O), 2023, pp.1-19.
18. Anthoni Amali A. and J. Jesintha Rosline, "Alternate Quadra Sub - Merging Polar Fuzzy Soft Graph and its Application", *Reliability: Theory & Applications* ISSN: 1932-2321, 2023 (September 2023), Vol 18, 3(74), 97 – 112.
19. G. Aruna and J. Jesintha Rosline, "Quadrastrophic Fuzzy Sets and its applications in OCD decision making", *Journal of Propulsion Technology*, ISSN :(1001-4055), 2023, Vol.44, Issue 4, pp. 3241-3258.
20. Anthoni Amali A. and J. Jesintha Rosline, "Augmentation on Alternate Quadra Submerging Polar Fuzzy Graph and its Application" *Journal of Propulsion Technology*, ISSN :(1001-4055), 2023, Vol.44, Issue 4, pp. 8029 – 8049.
21. G. Aruna and J. Jesintha Rosline, "Properties of Quadrastrophic Fuzzy Set and its Applications" *Reliability: Theory & Applications*, ISSN: 1932-2321, 2023, Vol. 18, Issue 4(76), pp. 208 – 220.
22. Anthoni Amali A. and J. Jesintha Rosline, "Regularity of Alternate Quadra Submerging Polar Fuzzy Graph and its Application", *Reliability: Theory & Applications* ISSN: 1932-

- 2321, 2023 (March 2023), Vol 19, 1(77), 238 – 253.
23. G. Aruna and J. JesinthaRosline, “Quadrastrophic Fuzzy Matrix and its Application” *Reliability: Theory & Applications*, ISSN: 1932-2321, 2024, Vol. 19, Issue 4(80), pp. 120-131.
 24. G Aruna, J Jesintha Rosline, Maria Singaraj Rosary, Mohammad Reza Farahani, Mehdi Alaeiyan, Murat Cancan,” Integrating fuzzy numbers in analyzing students’ decisions on higher education and employment”, *Journal of Combinatorial Mathematics and Combinatorial Computing*, 2024, Vol 124, pp. 277 – 290.
 25. G. Aruna, J. Jesintha Rosline and Anthoni Amali A., “Exploring Quadrastrophic Fuzzy Set: Applications in Assessing Stress Levels and Self – Esteem Connections”, *Reliability: Theory & Applications* ISSN: 1932-2321, 2025 (2025), Vol 20, 1(82), 700 – 714.
 26. Anthoni Amali A., J. Jesintha Rosline and G. Aruna, “Alternate Quadra – Submerging Polar Fuzzy Graph and its Decision Making Analysis”, *Reliability: Theory & Applications* ISSN: 1932-2321, 2025 (2025), Vol 20, 1(82), 157 – 171.
 27. V. Divya and J. Jesintha Rosline, “Fermatean Quadripartitioned Neutrosophic Fuzzy Graph”, *Reliability: Theory & Applications* ISSN: 1932-2321, 2025 (Sept 2025), Vol 20, 3(86), 816 – 828.
 28. G. Aruna and J. Jesintha Rosline, “A Comparative Study of MCDM Approaches: Exploring the Influence of Additional Parameters in Mathematics” *Optimality* (Oct 2025), Vol 2(3), 177 – 192.

Book Chapter Publications

1. Anthoni Amali A. and J. Jesintha Rosline, “Operations on Alternate Quadra – Submerging Polar (AQSP) Fuzzy Graphs and its Applications”, *Trends in Mathematics (Springer)*(2024), 557 – 568.
2. G. Aruna and J. Jesintha Rosline, “Neutral – Bipolar Fuzzy Sets and its Applications”, *Trends in Mathematics (Springer)*(2024), 587 – 603.
3. S Yamuna, J Jesintha Rosline, “A Study on Ladder Fuzzy Graph and Its Properties”, *Intelligent and Fuzzy Systems (Springer)*, (July 2025) 57 – 65.
4. V. Divya, J. Jesintha Rosline and Anthoni Amali A., “Regularity of Fermatean Quadripartitioned Neutrosophic Fuzzy Graph”, *Intelligent and Fuzzy Systems (Springer)*, (July 2025) 39 - 47.
5. G. Aruna, J. Jesintha Rosline and T. Sathinathan “Advancing MCDM Solutions with Prism Intuitionistic Fuzzy Numbers” *Intelligent and Fuzzy Systems (Springer)*, (July 2025) 185 - 192.

FDP’s/ Seminars/ Workshops/Webinars

1. “Workshop on Graph Theory” organized by the Department of Mathematics, Stella Maris College on 18th and 19th Dec, 2007.
2. A short term course on “Optimization Theory & Practice”, organized by the Department of Mathematics, Stella Maris College on 15th, 17th, 27th and 28th Dec, 2007.
3. “One Day National Level Workshop on LATEX” Organized by Department of Mathematics, Jeppiaar Institute of Technology on 25th March, 2015.

4. “Short Term Training Programme on Numerical Methods and Their Applications(STTP – 2016)” Organized by the Department of Mathematics, Faculty of Science and Humanities, SRM University, Kattankulathur on 4th and 5th Nov, 2016.
5. Guest Lecture in “Workshop on Mathematical Applications” (Resource Person) on the topic “Fuzzy Graph Theory and its Application” organized by the PG and Research Department of Mathematics, St. Joseph’s College, Kudallore on 24th and 25th Febuary, 2017.
6. “Workshop on Applications of Mathematics in Engineering(WAME – 2019)” Organized by the Department of Mathematics, Faculty of Science and Humanities, SRM University, Kattankulathur on 2nd and 3rd March, 2019.
7. “International Conference on Integrated Knowledge Towards Enriched Society” Organized by Loyola Racine Research Institute of Mathematics and Computer Science, Loyola College, Chennai- 34. held on 22nd and 23rd January, 2020.
8. “National Conference on Teaching, Learning and Evaluation: Changes and Challenges” Organized by IOAC, Auxilium College(Autonomous), Vellore on 30th & 31st January, 2020.
9. Two Weeks FDP on “Managing Online Classes and Co-Creating MOOCS” organized by Teaching Learning Centre, Ramanujan College, University of Delhi from 20th April to 6th May, 2020.
10. One Week National Faculty Development Program and Online Training on “LATEX” organized by Sanjay Ghodawat University, Kolhapur in association with Spoken Tutorial Project, IIT – Bombay from 27th April to 2nd May, 2020.
11. One Week National Faculty Development Program “R Language” organized by PG and Research Department of Mathematics Auxilium College(Autonomous), Vellore in association with Spoken Tutorial Project, IIT – Bombay from 13th to 20th May, 2020.
12. Two Day Online “National Seminar on Recent Topics in Mathematics” (**Organizing Secretary**) organized by Department of Mathematics Auxilium College(Autonomous), Vellore on 28th and 29th May, 2020.
13. One day Online Workshop for “Enhancing Research Communication Skills through Science Direct and Mendeley” organized by IQAC and SoE, Faculty of Education, Dayalbagh Educational Institute, Agra on 3rd May, 2020.
14. One week Faculty Development Programme on “ Open Source Tools for Research” organized by Teaching Learning Centre, Ramanujan College, University of Delhi from 8th to 14th June, 2020.
15. One week International Faculty Development Programme(online) on “Evolving Best Teaching and Learning Practices in the Pandemic Era 2020” organized by the Board of Management, Auxilium College (Autonomous), Vellore from 15th to 21st June, 2020.
16. “Basic Author Workshop Research Article Writing and Reference Management Using Mendeley” Organized by Faculty of Science, Annamalai University on 22nd June, 2020.
17. Special Guest lecture on “Role of Fuzzy Sets in Graph” (Resource Person) organized by the Department of Mathematics, DKM College for Women, Sainathapuram, Vellore on 1st March, 2021.
18. Webinar on “Emerging Topics in Mathematics” (**Organizing Secretary**) organized by Department of Mathematics Auxilium College (Autonomous), Vellore on 1st October, 2021.

19. Webinar on “Recent Trends in Mathematics” (**Organizing Committee Member**) organized by Department of Mathematics Auxilium College(Autonomous), Vellore on 1st Dec, 2021.
20. “IP Awareness/ Training Program” organized by National Intellectual Property Awareness Mission on 25th January, 2022.
21. Webinar on “Developing Mathematical Thinking” (**Organizing Committee Member**) organized by PG and Research Department of Mathematics Auxilium College(Autonomous), Vellore on 27th January, 2022.
22. UGC – Sponsored Live “Online Induction Programme” conducted by UGC – Human Resource Development Centre, University of Kerala, Kariavattom on 28th and 29th March, 2022.
23. Special Guest lecture in Mathematics Association on the topic “Role of Graphs and Fuzzy Graphs in Networking” (Resource Person) organized by the PG and Research Department of Mathematics, KMG College of Arts and Science College, Gudiyattam on 12th April, 2022.
24. Two days “In-Service Teacher Training Programme” in Mathematics held at Muthurangam Government Arts College(Autonomous), Vellore held on 05th and 06th May, 2022.
25. Libre office suite calc 6.3, Libre office suite writer 6.3 and Libre office suit Impress 6.3 conducted by spoken tutorial project IIT ,Bombay (FDP) from 26th May, 2022 to 10th June, 2022 .
26. “Young Innovators Day” (**Organizing Committee Member**) organized by Research and Publication Committee and Centre for Innovation and Business Incubation on 23rd March, 2022.
27. FDP on “Microsoft Power BI Data Analyst Associate” organized by ICT Academy on 20th June, 2022 to 24th June, 2022 at Auxilium College, Vellore -6.
28. Webinar on “Application of mathematics” conducted by Department of mathematics Auxilium College, Vellore on 17th September 2022
29. “Intercollegiate Paper Presentation” (**Organizing Committee Member**) organized by the Committee for Research Ethics, Publication and IPR on 20th October, 2022.
30. Two days Faculty Development Program on “E - Content Development Hand on training session on OBS and OPS Software” organized by the Department of Communication Media, Auxilium College(Autonomous), Vellore- 6 on 15th and 17th October, 2022.
31. Special Guest Lecture in “Mathigon” (Resource Person) organized by Srishti School, Vellore on 2 Dec, 2022.
32. Webinar on “Awareness on Intellectual Property Rights” (**Organizing Committee Member**) organized by the IQAC, Committee for Research Ethics, Publication and IPR in collaboration with NIPAM on 20th Feb, 2023.
33. “Young Innovators Day” (**Organizing Committee Member**) organized by the Committee for Research Ethics, Publication and IPR, and Tamil Nadu Science Forum, Auxilium College branch on 28th Feb, 2023.
34. Special Guest Lecture in “International Conference on Mathematical Sciences and Applications(ICMA '23)” (Resource Person) on the topic “Application of Fuzzy Graphs in Networking” organized by PG and Research Department of Mathematics, Sacred Heart College(Autonomous), Tirupattur on 24th and 25th March, 2023.

35. “International Conference on Mathematical Sciences and Applications(ICMA '23)” (Session Chair Person) organized by PG and Research Department of Mathematics, Sacred Heart College(Autonomous), Tirupattur on 24th and 25th March, 2023.
36. Special Guest Lecture in the Inauguration of “Maths club” (Resource Person) on the topic “Math, well obtuse you” Organized by the BHAGWAN MAHAVEER DAYANIKETAN JAIN SCHOOL, Vellore on 6th July, 2023.
37. Special Guest Lecture in “State Level Seminar” on the topic “Evaluation of Mathematics to Fuzzy Mathematics” organized by PG and Research Department of Mathematics, C. Abdul Hakeem College, (Autonomous), Melvisharam on 19th July, 2023.
38. Webinar on “Publish and Progress” (**Organizing Committee Member**) organized by IQAC, Committee for Research Ethics, Publication and IPR & Library , Auxilium College(Autonomous), Vellore- 6 on 26th August 2023.
39. National Seminar on “Emerging Recent Trends in Applied Mathematics – 2023” (**Organizing Secretary**) conducted by the Department of Mathematics, Auxilium College(Autonomous), Vellore on 1st September, 2023.
40. Webinar on “Awareness on Intellectual Property Rights” (**Organizing Committee Member**) organized by the Committee for Research Ethics, Publication and IPR in collaboration with NIPAM on 16th September, 2023.
41. One Day Workshop on “NIRF Ranking 2024” Human Resource Development Centre, Thiruvalluvar University, Sekkadu on 4th October, 2023.
42. Special Guest Lecture in “Young Student Scientist Programme” organized by TNSCST and Auxilium College (Autonomous), Vellore – 6 on 4th January, 2024.
43. Special Guest Lecture in Two days online FDP on “Recent Advances in Mathematical Analysis and its Applications” on the topic “Evolution of Fuzzy Set Theory to Fuzzy Graph Theory” organized by St. Joseph’s College of Engineering, Chennai on 22.11.2023.
44. “International Conference on Mathematical Sciences and Applications (ICMA '24)” (Session Chair Person) organized by PG and Research Department of Mathematics, Sacred Heart College(Autonomous), Tirupattur on 15th and 16th February, 2024.
45. National Level Ignition Fiesta on “Youth Environmental Stewardship (YES)” (**Organizing Committee Member**) organized by AIIC and Research Cell in collaboration with Xavier Board of Higher Education in India on 22nd and 23rd February, 2024.
46. FDP on “Idea Generation Method”, (**Organizing Committee Member**) organized by the IQAC Auxilium College in Collaboration with ICTFrom 5/08/2024 to 9/08/2024.
47. “Nan – Muthalvan - UyarvukkuPadi”, organized by the Tamil Nadu Skill Development Corporation on 11/09/2024.
48. “International Conference on Emerging Trends in Material Science and Applications (ICEMA – 2024)”, organized by the Department of Physics, Auxilium College, Vellore - 6 on 12/09/2024.
49. “Linguaskill - Orientation for Staff Members by the Ebek Team”, organized by the PG and Research Department of English, Auxilium College, Vellore -6 on 7/10/2024
50. “Inter-School Math Fest” (**Organizing Committee Member**) organized by the Department of Mathematics Auxilium College (Autonomous), Vellore on 09/10/2024.

51. National Webinar on "NIRF Ranking: Understanding Parameters & strategies for improvement" (**Organizing Committee Member**) organized by IQAC Auxilium college (Autonomous), Vellore on 18th Nov 2024.
52. A five day online FDP on "Research in Mathematics: Present Trends and Future Prospects" organized by PG and Research Department of Mathematics, Sacred Heart College(Autonomous), Tirupattur from 18/11/2024 to 22/11/2024.
53. "AI tools and Techniques for Interactive Online Teaching", (**Organizing Committee Member**) organized by IQAC Auxilium college (Autonomous), Vellore on 28/11/2024.
54. A Five-Day National Level Online FDP, "Beyond Boundaries: Driving Innovation in Research", organized by Committee for Research Ethics, Publication & IPR, Auxilium College(Autonomous), Vellore in Collaboration with North East Institute of Social Sciences & Research, Dimapur, Nagaland from 26.12.24 to 30.12.24.
55. "Enhancing Institutional Performance in Quality Standards", (**Organizing Committee Member**) Organized by Internal Quality Assurance Cell (IQAC), Auxilium College(Autonomous), Vellore on 27.01.25.

As a **Doctoral Committee Member** for the following Ph.D. candidates:

S. No.	Scholar's Name	Guide's Name	College
1.	Mr. B. Arulselvam	Dr. A. Merceline Anita	Sacred Heart College(Autonomous), Tirupattur.
2.	Ms.G. GnanaPriya	Dr. Sabarmathi A.	Auxilium College(Autonomous), Vellore
3.	Ms.Mythili L.	Dr. D. Vijayan	Muthurangam Government Arts College, Vellore
4.	Mr. Madhan Kumar K.	Dr. D. Vijayan	Muthurangam Government Arts College, Vellore
5.	Ms. Lakshmi Devi R.	Dr. D. Vijayan	Muthurangam Government Arts College, Vellore
6.	Ms. Vikkitha	Dr. Syed Ali	Thiruvalluvar University, Sekkadu
7.	Mr. Maria Thangaraj J.	Dr. D. Ajay	Sacred Heart College (Autonomous), Tirupattur.