FACULTY PROFILE

Name	: Dr. L. Sujatha
Designation	: Assistant Professor and Head, PG & Research Dept. of Mathematics
Qualification	: M.Sc., M.Phil., Ph.D.,
Mobile Number	: 9486384320
E-mail id	: sujathal@auxiliumcollege.edu.in
Teaching Experience	: 22 years
Area of Specialization	: Fuzzy Set Theory and its Applications

Positions Held in Auxilium:

Current Responsibilities:

- Head - PG and Research Dept. of Mathematics (2018-till date)
- Co-ordinator of Spoken-Tutorial Project – IIT Bombay for Auxilium College (2021-till date)
- Chairman of PG Board of Studies -Mathematics (2018-till date)
- Member of UG Board of Studies – Mathematics (2007-till date)
- Mentor for the students of M.Sc. Mathematics

Responsibilities held:

- Team member for preparing course material for Value Education (2008-2010)
- Member of Educating Community (2010-2011)
- Dean of Science (2010-2013)
- Member of Research Cell - Research and Publication Committee (2015-2021)
- In charge of the Staff welfare fund – Shift II (2017-2021)
- Member - DST-FIST Project Committee (2018-2020)

- Staff In Charge of Mathematics Association (2016-2017)
- Member of the Board of Studies for

- ➢ PG Mathematics (2007-2018)
- ➢ M.Phil. Mathematics (2012-2018)
- Chairman of M.Phil. Board of Studies (2018-2020)
- Chief Examiner for
  - ➢ UG Mathematics valuation (2012-2018)
  - ➢ M.Phil. Mathematics valuation (2018-2020)
- Coordinator to organize the Classical dance programme for Madha TV in the Academic year 2018-2019.
- Co-ordinator for the Course Disaster Management in the Academic year 2019-2020 for 17 M.Phil. students (9 English, 2 Mathematics, 3 Computer Science, 2 Commerce & 1 Management)
- Tutor
- Mentor for the students of B.Sc. and M.Sc. Mathematics

Research Experience and Guidance:

Degree	Title of Work / Thesis	University where the work was carried out	Year of Completion
Ph. D. Mathematics	A Study on Optimization Problems and their Applications under Fuzzy Environment	Thiruvalluvar University, Vellore	2017

Granted Qualification approval (to hold the post) from the Thiruvalluvar University:

No. TU/R/Appl.Qulfn./Lecturer/SHC/2007/64   Date: 31 Jan 2007

Research Guidance (M.Phil.): 2011 to 2020

No. TU/R/M.Phil. (Mathematics)/(FT-PT)/Guideship/ACV/2011/3125   Date: 04.03.2011

Research Guidance (Ph.D.): 2020 to till date

No. TVU/R/Ph.D/Guideship(FT-PT)/2019/7621   Date: 24.10.2019

List of Ph.D. Scholars:

S. No.	Scholar name	Date of Registration
1.	Ms. Shakila V. (Pursuing)	10.07.2023
2.	Ms. Anitha N. .	Registered as PT candidate (July 2025)

List of M.Phil. Scholars:

Number of M.Phil. Students guided: 18		
S. No.	**Batch**	**Name of the M.Phil. Scholar**
1.		Ms. C. Divya
2.	2011-2012	Ms. S. Karpagam
3.		Ms. A. Sarthaj
4.		Ms. V. Sathiya
5.		Ms. K. Gayathri
6.	2012-2013	Ms. S.V. Kanimozhi
7.		Ms. S. Malathi
8.		Ms. P. Nalini
9.		Ms. N. Anitha
10.	2014-2015	Ms. K. Bharathi
11.		Ms. R. Chitra
12.		Ms. M. Abirami
13.		Ms. P. Anjali
14.	2015-2016	Ms. G. Shakila
15.		Ms. M. Vijayalakshmi
16.	2016-2017	Ms. J. Daphene Hyacinta
17.	2017-2018	Ms. P. Vinothini
18.	2018-2019	Ms. S. Kalaivani

No. of Papers Published: **36**

No. of Book Chapters Published: 1

No. of Papers Presented in the National/ International/ Seminars/ Workshops/ Conferences: 27

No. of Seminars/Workshops/Conferences organized (International/National/State): 18
- No. of programs organized through offline and online modes: 14
- Team members in organizing the program: 4

No. of Resource Talks: 13

No. of National/International/Seminars/ Workshops/Conferences/Congress/ Symposium/ Endowment Lecture/Conclave participated: 49
- Programmes - participated through offline mode: 31
- Programmes - participated through online mode: 18

No. of Faculty Development Programs attended: 16
- No. of Offline Participation in FDP: 03
- No. of Online Participation in FDP: 15

<u>Membership in professional bodies:</u>

- A Life-Time Member of IAENG [International Association of Engineers (Member Number:130290)]
- A Life-Time Member of the Association of Science, Education, and Technology
- A Life-Time Member of INAAR [International Association of Academicians and Researchers]
- A Life Time Member of Senior member of the American Society of Research (ASR Member Number: R2170161501)
- A Life Time Member of Academia for Advanced Research in Mathematics Society (AARM Membership No: F20170) (Reg. No. SRG/Vellore/96/2019)
- A Life Time Member of Academic & Research Conclave from 2022-23. (MSME Registration No: UDYAM-TN-03-01015425, Coimbatore, Tamilnadu, India.

- Appointed as a member of the reconstituted Board of Studies in Mathematics (PG), Thiruvalluvar University for a period of three years from 15.06.2023 to 14.06.2026. (No.TU/R/Recon. of BOS/2023/7642 dated: 23.06.2023)
- Nominated as a University Nominee to serve as a member of the Board of Studies in Mathematics of Marudhar Kesari Jain College for Women (Autonomous), Chinnakallupalli, Vaniyambadi - 635751 for a period of three years from 20.02.2024 to 19.02.2027. (No.TVU/R/BOS/Uni. Nominee/2024/9529.M dated: 20.02.2024)
- Nominated as a University Nominee to serve as a member of the Board of Studies in Mathematics of Arcot Sri Mahalakshmi Women's College (Autonomous), Arcot, Villapakkam-632521 for a period of three years from 02.07.2025 to 01.07.2028. (No.TVU/R/BOS/Uni. Nominee/2025/1402 dated: 02.07.2025)

Membership in other bodies:

- Member of the Nature Science Foundation (NSF).
- A Member of the All India Psychology Academy (AIPA)

Honors & Awards received:

- Received **PARA AWARDS – 2020 for Best Professor** from Puducherry Academic Researchers Association (A Unit of Benevolent Trust), Regd. No. 399/2011 on 04.01.2020.
- Received **Adarsh Vidya Saraswati Rashtriya Puraskar** (**National Award of Excellence 2020**) on 20.02.2020 from Glacier Journal Research Foundation-Global Management Council, Ahmedabad.
- **Co-ordinator for STP, IIT Bombay online course**:
  - Dr. L. Sujatha received a **letter of Appreciation** on **09.03.2021**, for conducting training (R & JAVA) for the I & II M.Sc. students of Mathematics, Auxilium College (Autonomous), Vellore in association with STP-IIT Bombay in the month of February 2021.
  - Auxilium College won the **Spoken Tutorial National Academic Excellence Award** for outstanding contribution to organizing training and spreading awareness on FLOSS/MOOCs. On behalf of Auxilium College, received the award

along with the Principal Dr. (Sr.) Jaya Santhi at the **"National Level Conclave on Spoken Tutorial Teaching-Learning Best Practices & Award Ceremony 2022"** in the Victor Menezes Convention Centre (VMCC), IIT Bombay, Mumbai, Maharashtra on **27th August 2022**.

➢ Dr. L. Sujatha received a **letter of Appreciation** on **01.11.2022**, for spreading awareness and holding Software Training workshops at Auxilium College (Autonomous), Vellore during the academic session **2021-2022.**

➢ Dr. L. Sujatha received a **letter of Appreciation** on **11.07.2023**, for spreading awareness and holding Software Training workshops at Auxilium College (Autonomous), Vellore during the academic session **2022-2023.**

➢ Auxilium College (Autonomous), Vellore, received a **Certificate of Appreciation** for functioning as Spoken Tutorial, IIT Bombay's Nodal Resource Centre (NRC) for the Vellore region and successfully conducted IT Skill course Training on "LibreOffice Suite Writer 6.3" for the students of Arcot Sri Mahalakshmi Women College, Vilapakkam in the academic year **2022-2023**.

➢ Dr. L. Sujatha received a **letter of Appreciation** on **11.07.2023**, for spreading awareness and holding Software Training workshops at Auxilium College (Autonomous), Vellore during the academic session **2023-2024.**

No. of Online Courses completed (Minimum of 4 Weeks): 1

- 5 weeks **online course** on "English for Career Development" offered through Coursera.

Patent:

Type: Utility Patent

Application No.: 202441096697 A

Date of filing of Application: 06/12/2024

Publication Date: 13/12/2024

Journal No. & Year: 50/2024

Page No.: 118491

Title of the invention: Quantum Inspired Optimization Algorithm for Solving Complex Problems

Served as a Technical Program Committee member:

- Technical Program Committee member of the 11th **International Conference** on Computational Intelligence and Software Engineering (CiSE 2019) held on January 5-7, **2019** in **Bangkok, Thailand**.
  https://www.janconf.org/conference/OrganizingCommittee.aspx?id=1076
- Technical Program Committee member of the 3rd **International Conference** on Operations Research and Fuzziology (ORF 2019) held on July 19-21, **2019** in **Guilin, China**. https://www.confjuly.org/conference/OrganizingCommittee.aspx?id=1133

Served as an Editorial Board Member:

- Nominated Member of the **Editorial Board of Glacier Journal of Scientific Research, Ahmedabad** on **20.02.2020.** ISSN: 2349-8498, Impact Factor: 2.7614.

Served as a Conference Advisory Committee Member:

- International Conference on "Mathematical Innovative Techniques and their Applications", organized by Puducherry Academic Researchers Association (A Unit of Benevolent Trust), Regd. No. 399/2011, held on **9th May 2021.**
- International Conference on "Recent Trends on Multidisciplinary – Innovative Techniques & their Applications**"**, organized by Puducherry Academic Researchers Association (A Unit of Benevolent Trust), Regd. No. 399/2011, held on **16th May 2021**.

Served as a Reviewer & Advisory Committee Member of the Journal:

- **Reviewer of International Journal** of Research and Analytical Reviews (IJRAR) Referral Management System (RMS) (E-ISSN 2348-1269, P-ISSN 2349-5138) holding Member ID: 114506 from **5th March 2019**.
- **Advisory Committee Member:** Studies in Indian Place Names, Multidisciplinary **UGC Care Listed Journal** Recent Innovations in Management, Science and Humanities. ISSN: 2394-3114, Vol. 40, Issue 45, **March 2020-03-14.**

Served as a Reviewer for the following Journals:
Total number of articles reviewed for 11 Journals: 24

1. Reviewed **1 article** for Springer in the Journal of Mathematical Modelling and Algorithms in Operations Research.
2. Reviewed **2 articles** for the British Journal of Applied Science and Technology.
3. Reviewed **2 articles** for the Journal of Basic and Applied Research International.
4. Reviewed **3 articles** for the Journal of Applied Mathematics and Physics (JAMP)
5. Reviewed **6 articles** for the Journal of Advances in Mathematics and Computer Science
6. Reviewed **4 articles** for the Asian Research Journal of Mathematics
7. Reviewed **1 article** for the Asian Journal of Current Research
8. Reviewed **2 articles** for the Asian Journal of Mathematics and Computer Research
9. Reviewed **1 article** for the Journal Springer – Trends in Mathematics
10. Reviewed **1 article** for the Far East Journal of Mathematical Sciences (FJMS)
11. Reviewed **1 article** for the Asian Journal of Probability and Statistics

Served as a Chairperson for the following Conferences:

1. Chairperson of the paper presentation session in the "**National Conference** on Discrete Mathematics and its Applications (NCDMA – 2018)", organized by the Department of Mathematics, **Sacred Heart College (Autonomous), Tirupattur**, on February 9th and 10th, **2018.**
2. Chairperson of the paper presentation session in the Two Day "**International Conference on Mathematical Computer Engineering (ICMCE-2018)**", organized by Mathematics Division, School of Advanced Sciences (SAS), **VIT, Chennai**, on November 23-24, **2018.**
3. Chairperson of the paper presentation session in the Two Day "**International Conference on Mathematical Computer Engineering (ICMCE-2020)**", organized by Mathematics Division, School of Advanced Sciences (SAS), **VIT, Chennai**, on February 21-22, **2020.**

Served as a Resource Person for the following Programmes:

1. Delivered a **"Motivational Talk to the teachers"** (In-service Training for Social Science/Mathematics Teachers), organized by RASHTRIYA MADHYAMIK SHIKSHA ABHIYAN (RMSA) on 2nd August **2017.**

2. Delivered an Invited talk on "A special fuzzy set and its Application", organized by the PG and Research Dept. of Mathematics, Sacred Heart College, Tirupattur on 29th January **2018**.

3. Delivered a talk on "Applications of Fuzzy Set in Operations Research" in the **"National level Seminar on Modern Techniques in Mathematical Modeling and Operations Research"**, organized by PG and Research Department of Mathematics and Department of Statistics, Marudhar Kesari Jain College for Women, Vaniyambadi on 6th September 2019.

4. Delivered a talk on "Fuzzy Numbers and their Applications" in the **"State level Seminar on Fuzzy Numbers and their Applications",** organized by PG and Research Department of Mathematics, K.M.G College of Arts and Science, Gudiyattam on 3rd October **2019.**

5. Delivered an invited talk in the **National Webinar** on "Fuzzy set theory and its Applications", organized by the Dept. of Mathematics, Little Flower Degree College, Uppal, Hyderabad 22nd May 2020.
   Zoom Link:
   https://us02web.zoom.us/j/85106363782?pwd=RUZkQlZiSy9JK3kzblp4QStOcVFCQT09

6. Delivered a talk on "Fuzzy Mathematics" and "Co-Existence with Nature & Humanity – Build back a better future" in the **Mathematics Association Inauguration,** organized by the Dept. of Mathematics, Nirmala College for Women, Coimbatore 641 018 on 18th Aug 2020. Google Meet: https://meet.google.com/cok-hhbm-pky

7. Delivered an invited talk in the One Week **International Online Faculty Development Program** on "Recent Trends and Applications in Mathematics (IFDPRTAIM-2020), organized by the Dept. of Mathematics, Little Flower Degree College, Uppal, Hyderabad 14th September 2020. Google Meet Link: https://meet.google.com/hsf-nygq-vsg

8. Delivered a talk on "Fuzzy Relations and its Applications", organized by PG and Research Department of Mathematics, Research Forum Sacred Heart College (Autonomous), Tirupattur – 635 601 28.10.2020. Google Meet Link: https://meet.google.com/dmt-obpt-apk

9. Delivered a talk on **"Fuzzy Sets and Models of Decision Making"** in a **Two-Day Lecture Workshop** on "Applications of Mathematics", organized by Aurora's Degree & P.G College, Hyderabad, Telangana-506009 on 24.11.2020.
Google Meet Link: meet.google.com/rjb-sxpz-ffk

10. Delivered an invited talk in the **Webinar** on "Fuzzy Set Theory", organized by PG & Research Dept. of Mathematics, St. Joseph's College of Arts and Science (Autonomous), Cuddalore on 31.03.2021. Google Meet Link: https://meet.google.com/qxx-ahyg-bzw

11. Delivered an invited talk in the **Seminar** on "Fuzzy Set Theory and its Applications", organized by the Dept. of Mathematics, Sree Abiraami Arts and Science College for Women, Gudiyatham-635803 on 18.08.2023.

12. Delivered an Invited talk at the **National Conference** on "Recent Trends in Applied Mathematics – RTAM 2023", organized by PG and Research Dept. of Mathematics, K.M.G. College of Arts and Science, Gudiyatham on 15.09.2023.

13. Delivered a Guest Lecture on "Mathematical Modelling", organized by the Dept. of Mathematics, Sree Abiraami Arts and Science College for Women, Gudiyatham-635803 on 01.08.2025.

Paper Publications:

No. of Papers Published in the Journal: 36

1. **L. Sujatha** and R. Sattanathan, "Fuzzy shortest path problem based on triangular density function", International Journal of Ultra Scientist of Physical Sciences, Vol. 21, No. 3, pp. 731-738, **2009.** ISSN: 0970-9150

2. **L. Sujatha** and R. Sattanathan, "Fuzzy shortest path problem based on triangular L-R type fuzzy number using Acceptability index", International Journal of Engineering and Technology, Vol. 6, No. 4, pp. 575-578, **2009.** ISSN: 1812-7711

3. **L. Sujatha** and R. Sattanathan, "Fuzzy shortest path problem based on Interval numbers", International Journal of fuzzy systems and rough systems, Vol. 2, No. 2, pp. 57-60, **2009.** ISSN: 0974-858X

4. **L. Sujatha** and R. Sattanathan, "Fuzzy shortest path problem based on similarity degree using L-R type fuzzy numbers", International Journal of Computational Intelligence Research and Applications, Vol. 3, No.2, pp. 213 -216, **2009.** ISSN: 0973-6794

5. **L. Sujatha** and R. Sattanathan, "Fuzzy longest path problem in an acyclic digraph", International Review of fuzzy mathematics, Vol. 4, No. 1-2, pp. 1-9, **2009.** ISSN: 0973-4392

6. **L. Sujatha** and R. Sattanathan, "Fuzzy shortest path problem based on similarity degree using trapezoidal fuzzy number", Journal of Computer and Mathematical Sciences, Vol. 2, No. 6, pp. 820-826, **2011.** ISSN: 0976- 5727

7. **L. Sujatha** and S. Elizabeth, Fuzzy Shortest Path Problem based on Similarity Degree", Applied Mathematical Sciences, Vol. 5, No. 66, pp. 3263 – 3276, **2011** (**Scopus Indexed**). EID: 2-s2.0-82255166879. ISSN: 1312-885X

8. S. Elizabeth and **L. Sujatha**, "Fuzzy Shortest Path Problem based on Index Ranking", Journal of Mathematics Research, Vol. 3, No. 4, pp. 80-88, **2011.** ISSN: 1916-9795(print).

9. S. Elizabeth and **L. Sujatha**, "Fuzzy Shortest Path Problem based on α- cut", Journal of Science, Technology and Management, Vol. 4, No. 4, pp. 23- 33, **2012.** ISSN: 0974-8334

10. S. Elizabeth and **L. Sujatha**, "Fuzzy Shortest Path Problem based on level λ- triangular LR fuzzy numbers", Advances in Fuzzy Systems, Vol. 2012, 6 pages, **2012 (Scopus Indexed**). EID: 2-s2.0-84856411198. DOI: 10.1155/2012/646248. ISSN: 1687-7101

11. S. Elizabeth and **L. Sujatha**, "k- stage Fuzzy Transportation Problem based on Interval Valued Fuzzy Numbers", International Journal of Scientific and Engineering Research, Vol. 3, Issue 11, pp. 155-162, **2012.** ISSN: 2229-5518

12. S. Elizabeth and **L. Sujatha**, "Fuzzy Travelling Salesman Problem", International Journal of Applied Mathematics, Vol. 28, Issue 2, pp. 1236-1241, **2012.** ISSN: 2051-5227

13. S. Elizabeth and **L. Sujatha**, "Fuzzy Critical Path Problem for Project Network", International Journal of Pure and Applied Mathematics, Vol. 85, No. 2, pp. 223 – 240, **2013** (**Scopus Indexed**). EID: 2-s2.0-84877962458. DOI: 10.12732/ijpam.v85i2.4. ISSN: 1311-8080

14. S. Elizabeth and **L. Sujatha**, "Application of Fuzzy Membership Matrix in Medical Diagnosis and Decision Making", Applied Mathematical Sciences, Vol. 7, No. 127, pp.

6297 – 6307, **2013** (**Scopus Indexed**). EID: 2-s2.0-84889582139. DOI: 10.12988/ams.2013.38485. ISSN: 1312-885X (print)

15. S. Elizabeth and **L. Sujatha**, "Critical Path Problem under Fuzzy Environment", International Journal of Computer Applications, Vol. 75, No.1, pp. 7 -11, **2013.** ISSN: 0975-8887

16. S. Elizabeth and **L. Sujatha**, "On Searching Shortest Path in a Classical Network with Fuzzy Edge Weights", Mathematical Sciences, International Research Journal, Vol. 3, Issue 2, pp. 568-574, **2014.** ISSN: 2278-8697

17. S. Elizabeth and **L. Sujatha**, "Medical Diagnosis based on Interval Valued Fuzzy Number Matrices", Annals of Pure and Applied Mathematics, Vol. 7, No. 1, pp. 91 – 96, **2014.** ISSN: 2279-087X(print)

18. S. Elizabeth and **L. Sujatha**, "Fuzzy Shortest Path Problem based on Interval Valued Fuzzy Number Matrices", International Journal of Mathematical Sciences and Engineering Applications, Vol. 8, No. 1, pp. 325 – 335, **2014.** ISSN: 0973-9424

19. S. Elizabeth and **L. Sujatha**, "Fuzzy Shortest Path Problem based on Level λ- LR Type Representation of Fuzzy Interval", Far East Journal of Mathematical Sciences, Vol. 93, No. 1, pp. 43- 63, **2014** (**Scopus Indexed**). EID: 2-s2.0-84926335012. ISSN: 0972-0871

20. S. Elizabeth and **L. Sujatha**, "Fuzzy Longest Path Problem for Project Scheduling", Advances in Fuzzy Sets and Systems, Vol. 17, No. 1, pp. 1-25, **2014.** ISSN: 0973-421X

21. **L. Sujatha** and S. Elizabeth, "Fuzzy One Point Method for Finding the Fuzzy Optimal Solution for FTP and FUAP", International Journal of Fuzzy Mathematical Archive, Vol. 6, No. 1 &2, pp. 35 – 44, **2015**. ISSN: 2320-3242(print)

22. S. Elizabeth and **L. Sujatha**, "Project Scheduling Method using Triangular Intuitionistic Fuzzy Numbers and Triangular Fuzzy Numbers", Applied Mathematical Sciences, Vol. 9, No. 4, pp. 185 – 198, **2015** (**Scopus Indexed**). EID: 2-s2.0-84922554182. DOI: 10.12988/ams.2015.410852. ISSN: 1312-885X (print)

23. S. Elizabeth and **L. Sujatha**, "Fuzzy Project Network for Management Science", International Journal of Pure and Applied Mathematics, Vol. 101, No.5, pp. 631-640, **2015** (**Scopus Indexed**). EID: 2-s2.0-84934325411. ISSN: 1311-8080

24. S. Elizabeth, M. Abirami and **L. Sujatha**, "Finding Critical Path in a Project Network under Fuzzy Environment", Mathematical Sciences, International Research Journal

(MSIRJ), Vol. 5, Special Issue 1, pp. 31-36, March **2016.** ISSN: 2278-8697. https://www.imrfjournals.com/msirj5s1

25. S. Elizabeth, **L. Sujatha** and P. Anjali, "Fuzzy zero point Method for finding the fuzzy objective value for UFTP", Global Journal of Pure and Applied Mathematics (GJPAM), Vol. 12, No. 3, Special Issue, pp.817-823, **2016.** ISSN: 0973-1768

26. **L. Sujatha** and J. Daphene Hyacinta, "The shortest path problem on networks with intuitionistic fuzzy edge weights", Global Journal of Pure and Applied Mathematics (GJPAM), Vol. 13, No. 7, pp. 3285-3300, **2017.** ISSN:0973-1768. https://www.ripublication.com/gjpam17/gjpamv13n7_38.pdf

27. **L. Sujatha** and J. Daphene Hyacinta, "Application of Triangular Fuzzy Membership Matrix in the Study of Medical Diagnostic Model", Advances in Fuzzy Mathematics (AFM), Vol. 12, No. 4, pp. 945-953, **2017.** ISSN: 0973-533X. https://www.ripublication.com/afm17/afmv12n4_24.pdf

28. **L. Sujatha,** P. Vinothini and R. Jothilakshmi, "Solving Fuzzy Transportation Problem using Zero Point Maximum Allocation Method", International Journal of Current Advanced Research (IJCAR), Vol. 7, Issue 1, pp. 173-178, January **2018. UGC Journal number: 43892.** ISSN: O: 2319-6475, P: 2319-6505. https://journalijcar.org/issues/solving-fuzzy-transportation-problem-using-zero-point-maximum-allocation-method

29. **L. Sujatha,** S.A. Thara Jeni, T. Benith Sowmya and S. Jayasankari, "Solving Maximization problem in FTP and FAP using Fuzzy one point method", Mathematical Sciences, International Research Journal, Vol. 7, Issue 2, pp. 486-492, **2018.** ISSN: 2278-8697. https://www.imrfjournals.com/msirj72

(The paper also appeared as **Book chapter 29** of the book "Advances in Pure and Applied Mathematics", pp. 243-251, ISBN 978-93-86435-54-5, Published by School of Mathematics, Madurai Kamaraj University & International Multidisciplinary Research Foundation).

30. **L. Sujatha** and K. Deepalakshmi, "Solving Transshipment Problem using Zero Point and ICMM Method", International Journal of Research and Analytical Reviews (IJRAR), Vol. 6, Issue 1, pp.56-60, Feb. **2019. UGC Serial No. 43602.** Print ISSN: 2349-5138, EISSN 2348-1269. https://www.researchgate.net/profile/L-

Sujatha/publication/331311375_Solving_Transshipment_Problem_Using_Zero_Point_and_ICMM_Method/links/5c7a9dbba6fdcc4715a84e1b/Solving-Transshipment-Problem-Using-Zero-Point-and-ICMM-Method.pdf

31. **L. Sujatha,** P. Deepika and K. Kalaivani, "Fuzzy TOPSIS method for solving MCDM problems using Metric Distance and Similarity Measure", International Journal of Research and Analytical Reviews, Vol. 6, Issue 1, pp.550-553, February **2019. UGC Serial No. 43602.** Print ISSN: 2349-5138, EISSN 2348-1269.

    Published Paper URL: http://ijrar.org/viewfull.php?&p_id=IJRAR19J2802

32. **L. Sujatha,** M. Geetha Priya, N. Pavithra and R. Akila, "Fuzzy Transshipment Model using Fuzzy One Point Method", Advances in Mathematics: Scientific Journal, Vol. 9, No. 8, pp. 6153-6167, **2020** (**Scopus Indexed**). ISSN: 1857-8365 (printed), 1857-8438 (electronic). Special Issue on ICMA-2020. https://doi.org/10.37418/amsj.9.8.83

33. Md. Shahira Sulthana, G. Margaret Joan Jebarani and **L. Sujatha**, A mathematical model for apportionment and reapportionment using F26A graph and the magic labelling, Malaya Journal of Matematik (MJM), an International Journal of Mathematical Sciences with Computer Applications, Vol. 9, No. 1, pp.396-398, **2021.** https://doi.org/10.26637/MJM0901/0066

34. **L. Sujatha** and N. Anbarasi, "Fuzzy Shortest Path Problem with Triangular Intuitionistic Fuzzy Numbers as Arc Lengths", Advances and Applications in Mathematical Sciences, Vol.21, Issue 4, pp. 1687-1701, February **2022 (UGC approved).** https://www.mililink.com/upload/article/821927574aams_vol_214_february_2022_a6_p1687-1701_l._sujatha_and_n._anbarasi.pdf

35. Md. Shahira Sulthana, G. Margaret Joan Jebarani and **L. Sujatha**, A coding technique with atomic numbers using the prime cordial labelling on F26A graph, Advances and Applications in Mathematical Sciences Volume 21, Issue 4, pp. 1745-1752, February **2022 (UGC approved).** https://www.mililink.com/issue_content.php?id=59&iId=395&vol=21&is=4&mon=February&yer=2022&pg=1615-2281

36. V. Shakila and **L. Sujatha**, On Half Logistic-Gamma-G Class of Distribution and Estimation of Fuzzy Reliability", International Journal of Fuzzy Systems, **Published**

online: 13 August 2025. **Springer Nature** Link: https://doi.org/10.1007/s40815-025-02090-1

Paper Presentation:

No. of Papers Presented: 27

Presented paper on the topic

1. "Fuzzy shortest path problem based on fuzzy triangular number" in the **National Conference** on Recent Advancement in Pure and Applied Mathematics (RAPAM-2009), (*Sponsored by Tamil Nadu State Council for Higher Education),* organized by D.G Vaishnav College, Chennai-106 on Jan 23 &24, **2009.**

2. "Fuzzy Shortest path problem based on Statistical data and level (1-beta, 1-alpha) interval –valued fuzzy number", in the **National Conference** on Fuzzy Mathematics, Graph Theory and Applications (NCFMGT'09), organized by Mepco Schlenk Engineering College, Sivakasi on April 17 &18, **2009**. **ISBN: 81-88338-08.**

3. "Fuzzy shortest path problem based on Intersection area" in the **International Conference** on Mathematical Methods and Computation (ICOMAC 2009), (*UGC sponsored*), organized by Jamal Mohamed College (Autonomous), Tiruchirappalli on July 24 & 25, **2009. ISBN:978-81-8424-466-3.**

4. "Fuzzy shortest path problem based on similarity degree using trapezoidal fuzzy number" in the **International Conference** on Mathematics and Computer Science (ICMCS 2010), organized by Loyola College, Chennai on Feb 5 & 6, **2010. ISBN:978-81-908234-2-5.**

5. "Fuzzy shortest path problem based on Euclidean Distance" in the **National Seminars** on New vistas in fuzzy mathematics and its applications and Indian tradition in Mathematics, *(Sponsored by Dept. of Science and Technology, UGC, Kerala State Council for Science, Technology and Environment, Indian Council of Historical Research and Indian Council of Social Science Research),* organized by Kannur University, Kannur, Kerala from June 9-11, **2010.**

6. "Fuzzy shortest path problem based on Alpha-cut" in the **International Conference** on Mathematical Computing and Management (ICMCM 2010), *(Sponsored by AICTE, DST, CSIR, DIT, Kerala Mathematical Association, Computer Society of India, Trivandrum Chapter),* organized by the Dept. of Computer Applications MACFAST and Dept. of Management Science, Victoria University, Australia from Jun 17-19, **2010.**

7. "Fuzzy shortest path problem based on triangular fuzzy number matrices" in the **International Conference** on Mathematics and Computer Science (ICMCS 2011), organized by Loyola College, Chennai-34, on Jan 7 & 8, **2011. ISBN: 978-81-920490-0-7.**

8. "Fuzzy critical path problem for project scheduling" in the **National Conference** on Emerging trends in applications of mathematics to science and technology (NCETAM 2011), organized by Auxilium College, Vellore-6, on Dec 8 & 9, **2011.**

9. "Fuzzy shortest path problem based on level λ-LR type representation of fuzzy interval" in the **International Conference** on Mathematics in Engineering and Business Management (ICMEB 2012), organized by Stella Maris College and Loyola Institute of Business Administration, Chennai on Mar 9 & 10, **2012. ISBN: 978-81-8286-015-5.**

10. "Fuzzy critical path in a network" in the **International Conference** on Mathematical Modeling and Applied Soft Computing (MMASC 2012), (*Sponsored by CSIR, IEEE Madras Section, Department of Science &Technology, Ministry of Science & Technology, Department of Information Technology, Ministry of Communications & Information Technology, Government of India, Indian National Science Academy),* organized by Coimbatore Institute of Technology, Coimbatore from July 11-13, **2012. ISBN:978-81-923752-1-2.**

11. "k-stage fuzzy transportation problem based on interval valued fuzzy numbers" in the **International Conference** on Mathematics and its Applications, *(UGC-Autonomous funded),* organized by Islamiah College, Vaniyambadi on Aug 29, **2012.**

12. "Medical Diagnosis based on Interval valued fuzzy number matrix and its new membership function" in the **State Level Seminar** on Recent Trends in Higher Mathematics, organized by Voorhees College, Vellore on Oct 12, **2012.**

13. "Fuzzy Project Network for Management Science" in the **International Conference** on Mathematical Computer Engineering (ICMCE-2013), organized by VIT Chennai on Nov 29 & 30, **2013. ISBN: 978-93-82338-90-1.**

14. "On searching shortest path in a classical network with fuzzy edge weights" in the **International Conference** on Mathematical Sciences (ICM-2014), organized by School of Mathematics, Madurai Kamaraj University, Madurai from Aug 21-23, **2014. ISBN:978-93-84124-13-7.**

15. "Medical Diagnosis based on Interval valued fuzzy number matrices" in the 5 – Day **National Workshop** on Optimization and Fuzzy Mathematics (NWOFM-2014), organized by the Dept. of Applied Mathematics with Oceanology and Computer Programming, Vidyasagar University, Midnapore, West Bengal, India from Sep 9-13, **2014.**

16. "Fuzzy One Point Method for Finding the Fuzzy Optimal Solution for FTP and FUAP" in the **International Conference** on Mathematical Methods and Computations (ICOMAC 2015), organized by Jamal Mohamed College, Tiruchirappalli on Jan 22 & 23, **2015.**

17. "Decision Analysis in a network to identify the fuzzy shortest path" in the **National Conference** on Mathematical Applications in Engineering and Technology (NCMA 2015), organized by Sacred Heart College (Autonomous), Tirupattur, Vellore on Feb 11 & 12, **2015.**

18. "On searching critical path in a project network under fuzzy environment" in the **National Conference** on Recent Approaches of Mathematics to Science and Technology (NCRAM 2015), *(UGC sponsored),* organized by Auxilium College (Autonomous), Vellore on Feb 12 & 13, **2015. ISBN: 978-81-929362-1-5.**

19. "Fuzzy zero point Method for finding the fuzzy objective value for UFTP" in the **National Conference** on Pure and Applied Mathematics (NCPAM-2016), organized by School of Advance Sciences (SAS), VIT University, Vellore on Mar 12, **2016.**

20. "Solving Fuzzy Transshipment Model using Fuzzy One Point and Fuzzy Zero Point Method" in the **International Conference** on Advances in Mathematical Sciences (ICAMS), **(Theme:** Emerging Trends of Mathematics in Science, Engineering and Technology), organized by School of Advance Sciences (SAS), VIT University, Vellore in association with SIAM – VIT from December 1-3, **2017.**

21. "Solving fuzzy transportation problem using zero point maximum allocation method" & "Solving fuzzy critical path problem based on Mean-Width notation" in the **International Conference** on Intuitionistic Fuzzy Sets and their Applications, *(UGC-Autonomous funded),* organized by Islamiah College, Vaniyambadi on January 10 &11, **2018.**

22. "Solving Maximization problem in FTP and FAP using Fuzzy one point method" in the **International Conference** on Advances in Pure and Applied Mathematics 2018

(ICAPAM 2018), organized by School of Mathematics, Madurai Kamaraj University, Madurai from September 6 – 8, **2018.**

23. "Fuzzy TOPSIS method for solving MCDM problems using Metric Distance and Similarity Measure" in the **National Conference** on Applied Mathematics and its applications (Mathematical Modeling with Applications) (NCAMA 2019), organized by Sacred Heart College (Autonomous), Tirupattur, Vellore on February 6 & 7, **2019.**

24. "Solving Fuzzy Transshipment Model Using Fuzzy One Point Method" in the **National Conference** on Applied Mathematics and its applications (Mathematical Modeling with Applications) (NCAMA 2019), organized by Sacred Heart College (Autonomous), Tirupattur, Vellore on February 6 & 7, **2019.**

25. "A Mathematical Model for Apportionment and Reapportionment using F26a Graph and Magic Labeling" in the **International Conference** on Recent Trends and Technology of Mathematics and Science (QIVCRTTMS 2020), organized by Queens College of Arts and Science for Women, Pudukkottai, (Virtual mode) on October 7th & 8th **2020.**

26. "Statistical Hypothesis Testing under a Fuzzy Environment" in the **International Conference** on Mathematics and its Applications (ICMA 2024), organized by the PG and Research Department of Mathematics, Sacred Heart College (Autonomous), Tirupattur from 15-16 February **2024.**

27. "Comparative Study on Transportation, Assignment and Transshipment Problems using one-point and zero-point methods", in the **International Conference** on Mathematics and its Applications (ICMA 2024), organized by the PG and Research Department of Mathematics, Sacred Heart College (Autonomous), Tirupattur from 15-16 February **2024.**

FDP's/Seminars/Workshops/Webinars (Participated from 2023-2025)

1. **National Webinar** on "Publish & Progress", organized by IQAC, Committee for Research Ethics, Publication and IPR & Library, Auxilium College (Autonomous), Vellore on 26th August **2023**.

2. **National Seminar** on "Emerging Trends in Applied Mathematics", organized by the Department of Mathematics, Auxilium College (Autonomous), Gandhi Nagar, Vellore on 1st September **2023**.

3. **Online Workshop** on "Artificial Intelligence Tools", organized by IGNITE Life Skill Academy, Sacred Heart College (Autonomous), Thevara, Kochi on 1st December **2024**.

4. **National Conference** on "Mathematical Analysis & Applications", organized by the PG and Research Department of Mathematics, Voorhees College, Vellore in Collaboration with Sacred Heart College, Tirupattur on 21st March **2025**.

5. One Day **National Level Online Workshop** on "How to reduce Plagiarism in Research Papers", organized by HI Learn Edutech Institute, Bijapur/Vijayapur, Karnataka, India on 2nd May **2025**.

6. Five Days **FDP** on "Transforming Higher Education: Faculty Development Programme on Institutional Autonomy and NEP2020 Implementation", organized by IQAC, Mazharul Uloom College (Autonomous), Vellore from 10th May 2025 to 15th May **2025**.

7. One Week **National Level Online Faculty Development Programme** on "Advanced Research Methodology", organized by HI Learn Edutech Institute, Bijapur/Vijayapur, Karnataka, India from 22nd May 2025 to 28th May **2025**.

8. One Day **National Level Online Workshop** on "How to Write Research Papers using AI Tools", organized by HI Learn Edutech Institute, Bijapur/Vijayapur, Karnataka, India on 29th May **2025**.

Programmes Organized:

1. **Organizing Secretary** for a **State-Level Workshop** on "Latex - A Document Preparation System" held on 22.01.2019.

2. **Organizing Secretary** for an **"International Seminar** on Applied Mathematics (ISAM 2019)" held on 10.07.2019.

3. **Co-ordinator** for a **National Level Faculty Development Programme** on "Artificial Intelligence and Computer Vision using MATLAB and SIMULINK" jointly organized with PG Dept. of Computer Science, Auxilium College (Autonomous), Vellore held on 26.09.2019.

4. **Organizing Secretary** for a One-Week **National Level Online Faculty Development Programme** on "R Language" organized in collaboration with Spoken Tutorial - IIT Bombay held during 13.05.2020 to 20.05.2020.

5. **Organizing Secretary** for an **Online Course** on "CSIR-UGC NET/SET Mathematical Sciences and Basics of MATLAB" held during 03.07.2020 to 10.07.2020.

6. **Organizing Secretary** for a **National Webinar** on "Applications of Mathematics" held on 22.12.2020. (National Mathematics Day – To Commemorate 133rd Birth Anniversary of the Indian Mathematician Srinivasa Ramanujan) – Virtual mode.

7. **Organizing Secretary** for a **National Level Online Workshop** on "LaTex" held on 06.02.2021.

8. **Convener** for an **International Professional Development Programme** on "Major Role of Mathematics in the Development of Science and Technology" jointly organized with the Dept. of Mathematics, Little Flower Degree College, Uppal, Hyderabad, Telangana, held during 22.02.2021 to 26.02.2021 – Virtual mode.

9. **Co-ordinator** for a Two-Week **Online Faculty Development Programme** on "LibreOffice suite Writer, Calc & Impress" organized by the Board of Management, Auxilium College (Autonomous), Vellore in Association with Spoken Tutorial, IIT Bombay held during 26th May to 10th June, 2022.

10. **Co-ordinator** for a Five-Day **National Level Online PDP** on "Writing Research Articles in Mathematics & Statistics" organized in collaboration with Little Flower Degree College, Uppal, Hyderabad, Telangana held during 26.09.2022 - 30.09.2022.

11. **Co-ordinator** for the **International Webinar** on "Decoding Data Science" held on 25.11.2023.

12. **Co-ordinator** for the **State Level Workshop**: "Hands-on training on MATLAB (DST FIST Funded)" organized in association with Committee for Research Ethics, Publication & IPR, Auxilium College (Autonomous), Vellore held on 12.02.2024.

13. **Co-ordinator** for the **National Level Workshop:** "Hands-on training on R Programming" held on 30.08.2024.

14. **Co-ordinator** for the **State Level Workshop:** "Hands-on training on GEOGEBRA" organized in association with Auxilium Innovation and Incubation Center (AIIC), Auxilium College (Autonomous), Vellore on 28.01.2025.

Team Member in Organizing the following Programmes:

1. A **State Level Seminar** on Relevance and Challenges in Learning Abstract Mathematics (RACILAM 2003), organized by PG & Research Department of Mathematics, Auxilium College, Vellore on 07.02.2003.

2. **National Conference** on Emerging Trends in Applications of Mathematics to Science and Technology (NCETEM 2011), organized by PG & Research Department of Mathematics, Auxilium College (Autonomous), Vellore on 8th and 9th December 2011.

3. **National Conference** on Recent Approaches of Mathematics to Science and Technology (NCRAM 2015), organized by PG & Research Dept. of Mathematics, Auxilium College (Autonomous), Vellore on 12th and 13th February 2015.

4. Two-Day **State Level Workshop** on Intellectual Property Rights, organized by Tamilnadu State Council for Science and Technology (TNSCST), Government of India, Chennai, and Auxilium Research Cell & IPR Cell held on 2nd and 3rd August 2019.

Article Published in the College Magazine:

- An article titled "Is Bothaiyanaar an Alternative to Pythagorean theorem?" under the content "Creativity of the Staff" was published in the College Magazine 2020-2021.

Refresher Course attended:

- Attended a "Two-Week Refresher Course in Mathematics", organized by The Department of Mathematics, Ramanujan College and Teaching Learning Centre, Ramanujan College, University of Delhi in collaboration with Ministry of Education, Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching during March 16 – March 30, **2021.** Successfully completed the Refresher Course and obtained a **Grade A.**

Training Programme attended:

- Attended the **6 days training program** on **Academic Leadership** under the scheme of Pandit Madan Mohan Malaviya National Mission on Teachers and Training, sanctioned by **MHRD, Govt. of India and organized by UGC HRDC**, Aligarh Muslim University and Vaniambadi Muslim Educational Society for COE, Members of statutory Bodies,

Finance officers and State Government officials at Islamiah College (Autonomous), Vaniyambadi from **March 21st – 27th, 2019**.

E-Content Development:

Developed 3 E-Contents on the topic

- "Difference between Crisp set and Fuzzy set"
- "Types of Uncertainty"
- "Discrete and Continuous Fuzzy Sets"

Co-ordinator & organized the following Outreach Programmes through the Department:

- Joy of Giving (Christmas season): Visited Wheel Trust (Rehoboth –Home for Children) on 19.12.2013.
- Joy of Giving (Christmas season): Visited Karunalaya - Orphanage for Young Children on 22.12.2018.
- Joy of Giving (Christmas season): Visited BETHEL - Mentally Retarded Vocational and Rehabilitation Home on 18.12.2019.
- To celebrate the Glorious 75th Indian Independence Day: Visited Trinity Hostel-Wheel Trust on 15.08.2022.
- In collaboration with YRC: Joy of Giving (Christmas season): Visited BETHEL - Mentally Retarded Vocational and Rehabilitation Home on 22.11.2022.
- In collaboration with YRC: Joy of Giving (Christmas season): Visited Trinity Hostel-Wheel Trust on 26.11.2022.
- Joy of Giving (Christmas season): Visited Aathma Shanthi Old Aged Home, Katpadi, on 13.12.2023.

Appointed as Examiner for Central valuation

- Thiruvalluvar University, Vellore
- D.K.M College for Women, Vellore

Appointed as External Examiner (by Thiruvalluvar University) to conduct the

- ❖ **UG Practical Examinations (Statistics) at**

- Islamiah College, Vaniyambadi in **2008**
- S.S.S College of Arts, Science and Management in **2009**
- Indo-American College, Cheyyar in **2010**
- Adhiparasakthi College of Arts and Science, Kalavai in **2011**
- Mercury College of Arts and Science, Thandalam in **2012**
- Kaveripakkam College of Arts and Science, Kaveripakkam in **2012**
- Arunkrishna College of Arts and Science, Chengam in **2012**
- Holy Cross College of Arts and Science for Women, Tirupattur in **2016**
- King Nandhivarman College of Arts and Science, Thellar, Thiruvannamalai District in **2017**

❖ Appointed as an External Examiner by Thiruvalluvar University to conduct UG Practical Examinations (Programming in C) at Imayam College of Arts and Science, Vaniyambadi in **2018**

❖ Appointed as an External Examiner by Thiruvalluvar University to conduct Practical Examinations (FPMA24) for I B.Sc. Mathematics and Viva Voce examinations for Project (CPMA67) for III B.Sc. Mathematics students of Puratchi Thalaivar Dr. M.G.R. Government Arts and Science College, Madhanur, Vellore on **08.05.2023.**

❖ K.M.G College of Arts and Science, Gudiyattam on 27th, 28th, 30th March **2024**

❖ Government Arts and Science College, Serkadu, Vallimalai on 25th Oct **2024**

❖ Appointed as an External Examiner by Thiruvalluvar University to conduct Practical Examinations "Statistical Methods and their Applications" on **02.04.2025 & 03.04.2025** and Viva Voce examinations for Project (FPMA67) on **04.04.2025** at Voorhees College, Vellore.

❖ Appointed as an External Examiner for the Thiruvalluvar University Project Viva-Voce and Practical GeoGebra Examinations for B.Sc. Mathematics on **28.10.2025** at Arcot Sri Mahaalakshmi Women's College (Autonomous), Villapakkam.

❖ . **Appointed as Question Paper setter for setting question papers for the following Colleges:**

- D.K.M College for Women, Vellore
- Sacred Heart College, Tirupattur

- Adhiparasakthi College of Arts and Science, Kalavai

- Muthurangam Govt. Arts College (Autonomous), Vellore

- Theivanai Ammal College for Women, Villupuram

- Auxilium College (Autonomous), Vellore

Computer Knowledge: C and C++ languages

Technical Qualification: Completed Junior grade and Senior grade in Typewriting (English)

Summer Internship Project: Guided two M. Sc. Mathematics students of **Stella Maris College** (Autonomous), Chennai.
- Ms. S.A. Thara Jeni & Ms. T. Benith Sowmya (Stella Maris College) - Presented a paper on the topic "Solving fuzzy critical path problem using Mean-Width notation" in the *UGC-Autonomous funded* **International Conference** on Intuitionistic Fuzzy Sets and their Applications, organized by the Department of Mathematics, Islamiah College (Autonomous), Vaniyambadi on January 10 &11, **2018. The Abstract of the Paper was published in the Book of Abstracts.**

PG Project: Guided 40 M.Sc. Mathematics students in their 4th Semester PG Project.