

PROFILE

Name : Dr. J. MERLINE VINOTHA
Gender : Female
Date of Birth : 08-05-1977
Department : Mathematics
Designation : Assistant Professor,
PG & Research Department of Mathematics,
Holy Cross College (Autonomous), Tiruchirappalli-620002

Mail ID : merlinevinotha@gmail.com, merlinevinotha@hcctrichy.ac.in
Educational Qualification : M.Sc., M.Phil., PGDCA., SET, Ph.D.,

S. No.	Degree / Diploma	Subject / Main	Name of the College / University
1.	U.G.	MATHEMATIC S	HOLY CROSS COLLEGE(AUTONOMOUS), TRICHY-2
2.	P.G.	MATHEMATIC S	HOLY CROSS COLLEGE (AUTONOMOUS), TRICHY-2
3.	M.Phil.	MATHEMATIC S	ST. JOSEPH'S COLLEGE, TRICHY -2
4.	Ph.D.	MATHEMATIC S	MANONMANIAM SUNDARANAR UNIVERSITY, TIRUNELVELI
5.	NET/CSIR/SLET	MATHEMATIC S	BHARATHIYAR UNIVERSITY, COIMBATORE

Technical qualification:

S. No.	Degree / Diploma	Name of the College / University
1.	PGDCA	BHARATHIDASAN UNIVERSITY, TIRUCHIRAPPALLI

Teaching Experience at Holy Cross College: 25 Years

Memberships in academic bodies (Board of studies, Doctoral Committee Member)

1. Doctoral committee member for one candidate in Cauvery College, Tiruchirappalli.
2. Doctoral committee member for two candidates in Holy Cross College, Tiruchirappalli.
3. Life Member of Academic & Research Conclave, Coimbatore, Tamilnadu, India.

E-lessons developed:

S. No	Title of e-lessons
1.	Brachisto Chrono Problem
2.	Friction
3.	Arithmetic Operations on Fuzzy Set theory
4.	Least Upper Bounds

Research:

M.Phil.

Guided: 5

Ph.D.

Guided: 2

Guiding: 4

List of Papers Published:

1. Ritha, W., Merline Vinotha, J., Multi-objective Two Stage Fuzzy Transportation Problem, *Journal of Physical Sciences*, Vol.13, 2009, pp.107-120.
2. Ritha, W., Merline Vinotha, J., Multi-objective Transportation Problem Under Uncertain Environment, *International Journal of Computing and Applications*, Vol.5, No.2, December 2010, pp.129-145.
3. Ritha, W., Merline Vinotha, J., Total Time Minimization of Fuzzy Transportation Problem, *Journal of Intelligent and Fuzzy Systems*, 22, 2012, pp.1-7.
4. Ritha, W., Merline Vinotha, J., Multi-index Fixed Charge Bi-criterion Fuzzy Transportation Problem, *Proceedings of International Conference on Stochastic Modeling and Simulation*, Vel-Tech University, 15-17, December 2011, pp.244-251.
5. Ritha, W., Merline Vinotha, J., Linear Programming Approach for Two Echelon Supply Chain with Multi-product and Multi-time Period, *Proceedings of International Conference on Mathematics and Business Management*, March 9-10, 2012, Stella Maris College and Loyola College, Chennai, pp.339-346.

6. Ritha, W., Merline Vinotha, J., Heuristic Algorithm for Multi-index Fixed Charge Fuzzy Transportation Problem, *Elixir Computer Science and Engineering*, 46, 2012, pp.8346-8353.
7. Ritha, W., Merline Vinotha, J., Fuzzy Possibilistic Linear Programming Approach for Two Echelon Supply Chain with Multi-Product and Multi-Time Period, *Elixir Applied Mathematics*, 46,2012, pp.8334-8345.
8. Ritha, W., Merline Vinotha, J., A Priority Based Fuzzy Goal Programming Approach for Multi-Objective Solid Transportation Problem, *International Journal of Advanced and Innovative Research*, Volume 1, Issue 4, 2012, pp.263-277.
9. J. Merline Vinotha, (2015), Analytic Hierarchy Process and Topsis Method to Evaluate the Performance Of Schools *Ijite* Vol.03 Issue-03, (March, 2015) ISSN: 2321-1776
Impact Factor- 3.570
10. Merline Vinotha J, Vijayalakshmi P (2016)., Environmentally Responsible Multi-Item, Multi-Choice Fixed Charge Solid Transportation Problem Under Uncertain Environment, *International Journal of Applied Computational Science & Mathematics*,
11. Merline Vinotha, J. Saranya A Newtons Divided Difference Interpolating Polynomial Approach for Multi-choice Indefinite Quadratic Transportation Problem, *International Journal of Pure and Applied Mathematics*, Vol .116, 2017, Pages 243-251
12. Merline Vinotha J, Vijayalakshmi P, Eco Friendly Fully Fuzzy Multi objective Multi-item Solid Transportation problem, *International Journal of Management, IT & Engineering*, ISSN: 2249-0558, 2019.
13. Merline Vinotha, J. Saranya A, Multi Objective Quadratic Fuzzy Transportation Problem with Environmental Costs, *American International Journal of Research in Science, Technology, Engineering & Mathematics*,2019, Pages 239-245.
14. Merline Vinotha. J, R. Aishwarya Multi Objective Multi item Fuzzy Transportation Problem with Congestion charge, *Journal of Physical Sciences*, Vol. 24, 2019, 73-89
15. Merline Vinotha J, Vijayalakshmi P, Multi-Objective Restricted Solid Transportation Problem in Intuitionistic Fuzzy Environment with Emission Cost, *International Journal of Recent Technology and Engineering (IJRTE)* ISSN: 2277-3878, Volume-8, Issue-2S3, July 2019
16. Merline Vinotha J, Vijayalakshmi P, Environmentally Liable Multi-Objective Multi Time Span Fuzzy Fractional Capacitated Transportation Problem in the Two Echelon Supply Chain with Heterogeneous Items and Mixed Constraints, *International Journal*

- of Recent Technology and Engineering (IJRTE)* ISSN: 2277-3878, Volume-8, Issue-2S3, July 2019
17. Merline Vinotha. J, Saranya A., Fuzzy Transportation Problem with Intuitionistic Triangular Trapezoidal Fuzzy Number, *International Journal of Recent Technology and Engineering (IJRTE)* ISSN: 2277-3878, Volume-8, Issue-2S3, July 2019
 18. Merline Vinotha J, Ritha W, Antonitte Vinoline I, Nivetha Martin, Vijayalakshmi P, Multi-Objective Multi Time Span Fractional Capacitated Transportation Problem in the Two Echelon Supply Chain with Multiform Items and Mixed Constraints, *International Journal of Recent Technology and Engineering (IJRTE)* ISSN: 2277-3878, Volume-8, Issue-2S3, July 2019.
 19. Merline Vinotha J, Vijayalakshmi P, Multi-Objective Multi-Period Fixed Charge Solid Transportatio Problem with Externalities Using Extended VIKOR Approach under Pythagorean Fuzzy Environment, *International Journal of Grid and Distributed Computing*, Volume-13, Issue-2, Sep 2020, pp. 270-284. **(UGC Care list journal 2 - Web of Science)**
 20. Merline Vinotha J, Vijayalakshmi P Multi choice Ecological Intuitionistic Fuzzy Multi-Objective Transportation Problem with Non-Linear cost, *Solid State Technology*, Volume-63, Issue-2s, Oct 2020, pp. 2675-2689. **(UGC Care list journal 2- SCOPUS)**
 21. J. MerlineVinotha, W. Ritha & I. Antonitte Vinoline, An Algorithm for Multi Objective Fuzzy Fractional Transportation Problem, *European Journal of Molecular & Clinical Medicine* ISSN 2515-8260 Volume 07, Issue 09, 2020
 22. P. Selvi; W. Ritha; J. Merline Vinotha; I. Antonitte Vinoline, Economic Order Quantity Model for Sustainable Inventory Considering Different Sources of Environmental Cost Along with The Nonenvironmental Cost , *European Journal of Molecular & Clinical Medicine*, 2020, Volume 7, Issue 9, Pages 3107-3115.
 23. I.Antonitte Vinoline; W. Ritha; J. MerlineVinotha, Environmentally Sustainable Inventory Model with The Impact of Trade Credit And Partial Backordering, *European Journal of Molecular & Clinical Medicine*, 2020, Volume 7, Issue 9, Pages 3095-3106
 24. Merline Vinotha.J, Saranya A., An Algorithm for multi objective dual hesitant fractional transportation problem, *Malaya Journal of Matematik*, 2020, Vol 8, No. 4, Pages 2267-2272.

25. Merline Vinotha.J, Saranya A., Environmentally Sustainable Multi-Stage Multi-Objective Multi-Item Fixed-Charge Solid Fractional Hesitant Fuzzy Transportation Problem, *International Journal of Aquatic Science*, Vol 12, Issue 02, 2021, ISSN: 2008-8019, Pages: 3180-3191. **(Indexed in Web of Science)**
26. Merline Vinotha. J, Saranya A., Dual Hesitant Multi Objective Fractional Transportation Problem with Non-Linear Discount Cost, *International Journal of Aquatic Science*, Vol 12, Issue 02, 2021, ISSN: 2008-8019, Pages 3192-3212. **(Indexed in Web of Science)**
27. Merline Vinotha. J, P. Yasodai, W. Ritha, I. Antonitte Vinoline, Cost Analysis Of Fuzzy Tandem Queues Usinga Parametric Relation Pair , *Natural Volatiles & Essential Oils*, 2021, Vol 8, Issue 4, Pages 9965-9978.
28. J. Merline Vinotha, L. Brigith Gladys, W. Ritha, I. Antonitte Vinoline , Fuzzy Soft Set Based Multiobjective Fuzzy Transportation Problem Involving Carbon Emission Cost Linked With The Travelling Distance, *Natural Volatiles & Essential Oils* , 2021, Vol 8, Issue 4,Pages 9820-9837.
29. Antonitte Vinoline , W. Ritha , J. Merline Vinotha , A Multi Item Inventory Pricing Model With A Rate Of Production Proportional To The Rate Of Power Demand , *Natural Volatiles & Essential Oils* , 2021, Vol 8, Issue 4,Pages 9809-9819.
30. J. Jarvisvivin, J. Merline Vinotha, Multi-objective Green Solid Logistics Model under Sustainable Development using the e-Highway system with the Impact of Carbon Tax Policy, *TELEMATIQUE*, 2022, Issue 1, Pages 5719-5732. **(Indexed in Web of Science)**
31. Merline Vinotha, J., Saranya A. (2022), Environmentally conscious multi-objective Pythagorean hesitant fuzzy transportation problem with several items incorporates the selection of mode using multi criteria decision making method, *TELEMATIQUE*, Vol. 21, Issue 1, 2022, ISSN: 1856-4194, Pages 3055-3064. **(Indexed in Web of Science)**
32. Merline Vinotha, J., Saranya A. (2022) Cost-Time Trade-off of Dual Hesitant Transportation Problem with Multi Choice Parameters, *NeuroQuantology*, Vol. 20, Issue 8, July 2022, eISSN: 1303-5150, Pages: 9483-9491. **(Indexed in Scopus)**
33. Merline Vinotha, J., Brigith Gladys, L., (2023) Fuzzy Multichoice Multiobjective Multimodal Transportation Problem in Soft Environment, *European Chemical Bulletin*, ISSN: 2063 - 5346, Volume 12, Special Issue 2, Pages 2688 - 2694, August 2023. **(Indexed in Scopus)**

34. Merline Vinotha, J., Rathinabhagya, P., (2023) A Solid Waste Management for Vehicle Routing Problem with Split Delivery under Uncertainty, European Chemical Bulletin, ISSN: 2063 - 5346, Volume 12, Special Issue 2, Pages 2695 - 2700, August 2023. **(Indexed in Scopus)**
35. Merline Vinotha, J., Johns Praveena, U., (2023) A new Approach for Multi Objective Transshipment Problem under Fuzzy Environment, European Chemical Bulletin, ISSN: 2063 - 5346, Volume 12, Special Issue 2, Pages 2709 - 2720, August 2023. **(Indexed in Scopus)**
36. Merline Vinotha, J., Monika, M., (2023) The Impact of Logistics Monitoring in the inbound logistics modes for the Cruise Ships Construction, European Chemical Bulletin, ISSN: 2063 - 5346, Volume 12, Special Issue 2, Pages 2701 - 2708, August 2023. **(Indexed in Scopus)**
37. J.Merline Vinotha, U.Modenisha,A Comparative case study on shortest path of Environmentally Sustainable Multi-objective Transportation problem: Dijkstra's and Ant Colony Optimization Algorithms, Tuijin Jishu/Journal of Propulsion Technology,ISSN:1001-4055,Vol.44 No.3(2023) **(Indexed in Scopus)**
38. Merline Vinotha, J., Brigith Gladys, L., An Improved Preservation Technology Model for Triangular Pythagorean Fuzzy Multiobjective Solid Cold Transportation Problem, Proceedings of International Conference on Applied Mathematics & Nanoscience 2024. Vidya Academy of Science & Technology, Thrissur – 680501, INDIA
39. Merline Vinotha, J., Rathinabhagya. P, Fuzzy Vehicle Routing Problem for a Municipal Solid Waste Management System with Greenhouse Gas Emission at Various Disposal Stages, Proceedings of International Conference on Applied Mathematics & Nanoscience 2024. Vidya Academy of Science & Technology, Thrissur – 680501, INDIA
40. Merline Vinotha, J., Johns Praveena U., Multi Objective Electric Vehicle Transshipment Problem with Battery Swapping Stations under Fuzzy Environment, Proceedings of International Conference on Applied Mathematics & Nanoscience 2024. Vidya Academy of Science & Technology, Thrissur – 680501, INDIA
41. Merline Vinotha, J., Monika M., Effect of Intralogistics Integration in a Vendor-Buyer Model for Imperfect Production Systems, Proceedings of International Conference on Applied Mathematics & Nanoscience 2024. Vidya Academy of Science & Technology,

Thrissur – 680501, INDIA

Conference/Seminar/Workshop/ Training Programme attended - Academic & General:

S. No.	Theme	Place	International / National / State level	Year	Resource Person / Paper Presentation / Participation
1.	Linear Programming Approach For Two Echelon Supply Chain With Multi-Product And Multi-Time Period	Stella Maris College Chennai.	International Conference on Mathematics and Business Management	March 2012	Paper Presentation
2.	Multi-Index Fixed Charge Bi-Criterion Fuzzy Transportation Problem	Vel-Tech University Chennai.	International Conference on Stochastic Modeling and Simulation	December 2011	Paper Presentation
3.	International Conference On Mathematical Methods And Computation	Jamal Mohamed College, (Autonomous), Trichy-2	International	December 2017	Participation
4.	Two Days Faculty Development Workshop Outcome Based Education	Don Bosco College Co-Ed., Yelagiri Hills, Vellore.	National	October 2018	Participation
5.	International Conference On Mathematical Methods And Computation	Jamal Mohamed College, (Autonomous), Trichy-2	International	February 2019	Participation
6.	International Conference On Engineering And Natural Science	Institute Of Research Engineers Scientists Malaysia	International	April 2019	PAPER PRESENTATION

7.	International Conference On Mathematical Methods And Computation	Jamal Mohamed College, (Autonomous), Trichy-2	International	February, 2020	Participation
8.	One Day Workshop on Python Training	Jamal Mohammed College, Trichy,	International	February, 2020	Participation
9.	Workshop on “Artificial Intelligence and Machine Learning”	Baba Farid College, Bathinda, Punjab	National	November, 2022.	Participation
10.	International Conference on Mathematical Methods and Computation	Jamal Mohamed College, (Autonomous), Trichy-2	International	December, 2022	PAPER PRESENTATION
11.	International Conference on Recent Trends in Applications of Mathematics	Holy Cross College (Autonomous), Trichy.	International	January 2023	PAPER PRESENTATION
12.	One day In-service Faculty Workshop on Manipulation & Analysis of Data in SPSS	Holy Cross College (Autonomous), Trichy		14 th July, 2023	Participation
13.	International Conference on Recent Trends in Applications of Mathematics	Holy Cross College (Autonomous), Trichy	International	4 th August, 2023.	Participation
14	International conference on Mathematical Methods and Computations	Jamal Mohamed College, (Autonomous), Trichy-2	International	24 th July	Participation

FDP attended:

S. No.	Theme	Place	Date and Year
1	Five Day Online Faculty Development Programme on “New Epoch in Software Learning”	Holy Cross College (Autonomous), Trichy.	August,2021
2	Five Day Online International Faculty Development Programme on “Blended and Inclusive Strategies in Artificial Intelligence and Machine Learning”	Holy Cross College (Autonomous), Trichy.	October,2021
3	Webinar Series VI-Boot Camp for faculty on “Transdisciplinary Research and Startup Initiatives”	Holy Cross College (Autonomous), Trichy.	August-September,2021.
4	In-Service Teacher Training Programme on “Mathematical Sciences”	Periyar Government Arts and Science College, Trichy.	May, 2022.
5	Two-day In-service Faculty workshop on “Python & R Programming”,	Holy Cross College (Autonomous), Trichy.	July, 2022.
6	Ten days Faculty Refresher Programme on Teaching, Learning and Research in HEI’s	IOT Academy, Coimbatore	January 2023
7	One day in-service faculty workshop on Geogebra	Holy Cross College (Autonomous), Tiruchirappalli	July 2024

Details of membership in professional bodies /journals, editors, consultancy, resource person:

- 1. Chair Person in International Conference on Engineering and Natural Science, Institute of Research Engineers Scientists, Malaysia**
- 2. Scrutinize Member in Srimad Aandavan College of Arts and Science, Tiruchirappalli.**
- 3. NAAC RAF Orientation Programme, Bishop Heber College (Autonomous), Tiruchirappalli.**
- 4. Viva-Voce Examiner for UG and PG students of Mathematics in Srimad Aandavan College of Arts and Science, Tiruchirappalli.**

5. **Chair Person in International Conference on Mathematical Methods and Computations, Jamal Mohamed College (Autonomous), Tiruchirappalli.**
6. **Reviewer in Journal of Energy Research and Reviews**
7. **Reviewer in Journal of Geography, Environment and Earth Science International**
8. **Reviewer in Asian Journal of Research in Medical and Pharmaceutical Sciences**
9. **Reviewer in Asian Journal of Geographical Research**
10. **Resource person for Training program on Pedagogical Approaches in Teaching Mathematics and Sciences in RC school**

AWARDS:

1. **Indian Teacher Award 2021 by International Research Association, England, UK.**
2. **Best Researcher Award SAHEI 2023, Knowledge Research Academy, Tamil Nadu, India**

PATENTS:

Year	Agent	Patent Number	Title of Invention	Publication Date
2021	Government of India	20214108080	A machine learning regression vector for managing various aspects in the field of agriculture	30.04.2021
2022	Government of India	202221019944	Analysis of amikacin in human serum by UHPLC with fluorescence detector	22.04.2022
2022	Government of India	202241020636	Detecting and diagnosing of cancer using a convolutional neural network system	22.04.2022
2022	Government of India	202241027403	Detection of breast cancer using deep learning method	27.05.2022
2023	Government of India	202341055335	Sustainable Zero Waste Management Practices for Green Environmental Sustainability	17.08.2023

BOOK PUBLISHED:

Sustainable Waste Management Strategies for Greener and Eco-Friendly Environment,
Scientific International Publishing House.

Visit to Foreign Countries : Malaysia
Residential Address : 18, EAST STREET,
HIRUDAYAPURAM
PALAKARAI,
TIRUCHIRAPPALLI-620001
Telephone (R) With Area Code : 0431-2301201
Mobile : 9789475700