

**Dr. A. Saranya**

**Assistant Professor**

**PG and Research Department of Mathematics**

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**Academic Profile:**

<b>S. No.</b>	<b>Degree / Diploma</b>	<b>Subject / Main</b>	<b>Name of the College / University</b>	<b>Year of Completion</b>
1.	Ph.D.	Mathematics	Holy Cross College (Autonomous), Tiruchirappalli	2023
2.	M.Phil.	Mathematics	Seethalakshmi Ramaswami College (Autonomous), Tiruchirappalli	2014
3.	P.G.	Mathematics	Holy Cross College (Autonomous), Tiruchirappalli	2013
4.	U.G.	Mathematics	Holy Cross College (Autonomous), Tiruchirappalli	2011

**Teaching Experience :**

- Worked as assistant professor of Mathematics in Chidabaram Pillai College for Women, Mannachanallur from June 2014 – May 2015
- Working as assistant professor of Mathematics since June 2015 in Holy Cross College (Autonomous), Tiruchirappalli

**Total Years of Teaching Experience : 10 Years**

**Journal / Articles Published:**

<b>S.No.</b>	<b>Nature of the Journal</b>	<b>Details</b>
<b>1</b>	<b>UGC CARE</b>	Merline Vinotha, J., Saranya A (2017) ,Newton's Divided Difference Interpolating Polynomial Approach for Multi-choice Indefinite Quadratic Transportation Problem, <i>International Journal of Pure and Applied Mathematics</i> , (116): Pages 243-251.
<b>2</b>	<b>UGC CARE</b>	Merline Vinotha, J., Saranya A(2019), Multi Objective Quadratic Fuzzy Transportation Problem with Environmental Costs , <i>American International Journal of Research in Science, Technology, Engineering &amp; Mathematics</i> , Pages 239-245
<b>3</b>	<b>SCOPUS</b>	Merline Vinotha, J., Saranya A.(2019), Fuzzy Transportation Problem with Intuitionistic Triangular Trapezoidal Fuzzy Number, <i>International Journal of Recent Technology and Engineering (IJRTE)</i> ISSN: 2277-3878, Volume-8, Issue- 2S3
<b>4</b>	<b>UGC CARE</b>	Merline Vinotha, J., Saranya A.(2020) An Algorithm for Multi Objective Dual Hesitant Fuzzy Fractional Transportation Problem, <i>Malaya Journal of Matematik</i> , Vol. 8, Issue 4, 2267-2272, Pages 2267-2272
<b>5</b>	<b>SCOPUS</b>	Saranya A, Fracina Nishandhi I , Josephine F S,(2020) An Algorithm For Solving Hesitant Fuzzy Quadratic Fractional Transportation Problem , <i>European Journal of Molecular &amp; Clinical Medicine</i> , ISSN 2515-8260 , 3077-3084
<b>6</b>	<b>SCOPUS</b>	Josephine F S, Saranya A, Fracina Nishandhi I, (2020) A Dynamic Method for Solving Intuitionistic Fuzzy Transportation Problem, <i>European Journal of Molecular &amp; Clinical Medicine</i> , ISSN 2515-8260 , 5843-5854
<b>7</b>	<b>SCOPUS</b>	Fracina Nishandhi I, Saranya A, Josephine F S, (2020), Integrated Three Echelon Inventory Model with Finite Manufacturing And Remanufacturin grates Along With The Transportation Cost And Packaging Cost, <i>European Journal of Molecular &amp; Clinical Medicine</i> , ISSN 2515-8260 , 3125-3134
<b>8</b>	<b>WEB OF SCIENCE</b>	Merline Vinotha, J., Saranya A.(2021) Environmentally Sustainable Multi-Stage Multi-Objective Multi-Item Fixed-Charge Solid Fractional Hesitant Fuzzy Transportation Problem, <i>International Journal of Aquatic Science</i> , Vol 12, Issue 02 , ISSN: 2008-8019, Pages: 3180-3191
<b>9</b>	<b>WEB OF SCIENCE</b>	Merline Vinotha, J., Saranya A.(2021), Dual Hesitant Multi Objective Fractional Transportation Problem with Non-Linear Discount Cost , <i>International Journal of Aquatic Science</i> , Vol 12, Issue 02, ISSN: 2008-8019, Pages 3192-3212
<b>10</b>	<b>SCOPUS</b>	Saranya A, Fracina Nishandhi I , Josephine F S,(2021), An Algorithm for solving Quadratic Hesitant Fuzzy Transportation Problem, <i>Natural Volatiles &amp; Essential Oils</i> , Vol 8 , Issue 4, Pages: 10041-10048

<b>11</b>	<b>SCOPUS</b>	Fracina Nishandhi I, Saranya A, Josephine F S, (2021), Integrated Inventory Model with Freight Costs and Two Types of Quantity Discounts along with the Carbon Regulations Parameters such as Carbon Tax and Cap and Trade , , Natural Volatiles & Essential Oils , Vol 8 , Issue 4, Pages: 10892-10900
<b>12</b>	<b>SCOPUS</b>	Josephine F S, Saranya A, Fracina Nishandhi I, (2020), Optimization of Fuzzy Integrated Inventory Model using Triangular and Pentagonal Fuzzy Number, Natural Volatiles & Essential Oils , Vol 8 , Issue 4, Pages: 10041-10048
<b>13</b>	<b>WEB OF SCIENCE</b>	Merline Vinotha, J., Saranya A.(2022), Environmentally conscios multi-objective Pythagorean hesitant fuzzy transportation problem with several items incorporates the selection of mode using multi criteria decision making method, <i>TELEMATIQUE</i> , Vol. 21, Issue 1, 2022,ISSN : 1856-4194, Pages 3055-3064
<b>14</b>	<b>WEB OF SCIENCE</b>	Merline Vinotha, J., Saranya A.(2022) Cost-Time Trade-off of Dual Hesitant Transportation Problem with Multi Choice Parameters, <i>NeuroQuantology</i> , Vol. 20 , Issue 8, July 2022, eISSN: 1303-5150, Pages: 9483-9491
<b>15</b>	<b>SCOPUS</b>	Arockia Punitha S, Emima Jeronsia J, Saranya A (2023) Post – Pandemic Change in Women’s Online buying preferences , <i>SEDME (Small Enterprises Development, Management &amp; Extension Journal): A worldwide window on MSME Studies</i> , Vol. 50, Issue 2

#### Research activities – Papers Presented:

<b>S.No.</b>	<b>Name of the Conference</b>	<b>National / International</b>	<b>Details</b>
<b>1</b>	International Conference on Mathematical Methods and Computation (ICOMAC 2017),	International	Presented a paper titled on “Newton’s Divided Difference Interpolating Polynomial Approach for Multi-choice Indefinite Quadratic Transportation Problem”  Organized by Jamal Mohamed College(Autonomous), Tiruchirappalli – 620020.  11 <sup>th</sup> December 2017,

2	International Conference on Networking , Research and Innovation in Higher Education for a Sustainable Society – Challenges and Channels ,	International	Presented a paper titled “Environmentally Responsible Multi-Choice Multi-Objective Multi-Item Coal Transportation Problem”  Organized by Holy Cross College(Autonomous), Tiruchirappalli – 620002.  25 <sup>th</sup> , 26 <sup>th</sup> & 27 <sup>th</sup> July 2018
3	International Conference on Mathematical Methods and Computation (ICOMAC 2019),	International	Presented a paper titled on “Multi Objective Quadratic Fuzzy Transportation Problem with Environmental Costs” Organized by Jamal Mohamed College(Autonomous), Tiruchirappalli – 620020.  20 <sup>th</sup> and 21 <sup>th</sup> February 2019

**Conferences /seminars/ workshops - Attended :**

S.No.	Academic Year	Name of the Conferences /seminars/ symposia/workshops	National / International	Details
1.	2016-2017	National Conference On Advances In Applied Mathematical Sciences	National	Cauvery College For Women Trichy
2.	2018-2019	International workshop on machine intelligence and data science	International	MIR Academy, Kochi ,India. 31.05.2019, 01.06.2019
3.	2019-2020	International Conference on Mathematical methods and computation – ICOMAC 2020	International	Jamal Mohamed College (Autonomous), Tiruchirappalli – 620020.  19.02.2020
4.	2019-2020	Online Workshop on “ Mathematical Sciences for CSIR-NET/SET/GATE	National	Sree Narayana Guru College , KG Chavadi, Coimbarore. 11.5.2020-15.5.2020
5.	2019-2020	Recent Research Topics In Graph Theory	National	MES Mampad College Palappuram , Kerala 20.05. 2020 & 21.05.2020
6.	2019-2020	Reimaging Research in the Era of Disruptions and	International	Holy Cross College (Autonomous) ,

		Uncertainties		Tiruchirappalli – 620002. 21 .5.2020
7.	2019-2020	Interesting Features of Integral Equations	National	Holy Cross College (Autonomous) , Tiruchirappalli – 620002. 28 .5.2020
8.	2019-2020	Doing Mathematics using Softwares	National	Holy Cross College (Autonomous) , Tiruchirappalli – 620002. 29.5.2020
9.	2019-2020	Remote Classrooms – Digital Technology in Teaching Learning	National	Holy Cross College (Autonomous) , Tiruchirappalli – 620002. 30.5.2020
10.	2020-2021	Seed and Weed Nurturing Relationships	National	Holy Cross College (Autonomous), Tiruchirappalli – 620002. 2.6.2020
11.	2020-2021	Discover Your Values : COVID-19	National	Holy Cross College (Autonomous), Tiruchirappalli – 620002. 10.6.2020
12.	2020-2021	Risk Management in Times of Crisis	National	Holy Cross College (Autonomous) , Tiruchirappalli – 620002. 12.6.2020
13.	2020-2021	Mathematics For Competitive Examinations	National	Mary Matha College Of Arts And Science Theni 16.06.2020 to 20.06.2020
14.	2020-2021	ICT Tools for the 21 <sup>st</sup> Century Teacher	National	Holy Cross College (Autonomous) , Tiruchirappalli – 620002. 10.7.2020
15.	2020-2021	Applications of Various divisions of Mathematics	National	Holy Cross College (Autonomous), Tiruchirappalli – 620002. 25.7.2020
16.	2020-2021	Designing Finite State Automata	National	Holy Cross College (Autonomous) , Tiruchirappalli – 620002. 1.8.2020
17.	2020-2021	Empowerment Series –IV to IX	National	Holy Cross College (Autonomous) , Tiruchirappalli – 620002. 22.9.2020-24.9.2020 . 25.9.2020 , 17.10.2020 , 19.10.2020 & 20.10.2020
18.	2020-2021	Orientation on IVP –	National	Holy Cross College

		Innovation Voucher Program		(Autonomous) , Tiruchirappalli – 620002. 1.12.2020
19.	2020-2021	Addressing Challenges in Higher Education through the OBE mode	National	Holy Cross College (Autonomous) , Tiruchirappalli – 620002. 4.1.2021
20.	2020-2021	Present Trends In Applications Of Mathematics	International	Holy Cross College (Autonomous), Tiruchirappalli – 620002. 16.11.2020 & 17.11.2020
21.	2021-2022	Present Trends In Applications Of Mathematics	International	Holy Cross College (Autonomous), Tiruchirappalli – 620002. 19.04.2022 & 20.04.2022
22.	2022-2023	Two Day In service faculty workshop on Python & R-Programming	National	Holy Cross College (Autonomous), Tiruchirappalli – 620002. 12.07.2022 & 13.07.2022
23.	2022-2023	Present Trends In Applications Of Mathematics	International	Holy Cross College (Autonomous) , Tiruchirappalli – 620002. 09.01.2023 & 10.01.2023
24.	2023-2024	One Day In service Faculty Workshop on Manipulation & Analysis of Data in SPSS	National	Holy Cross College (Autonomous) , Tiruchirappalli – 620002 14 <sup>th</sup> July 2023
25.	2023-2024	International Conference on Recent trends in Applications of Mathematics.	International	Holy Cross College (Autonomous) , Tiruchirappalli – 620002. 4 <sup>th</sup> August 2023
26.	2023-2024	International Conference on Navigating Research and Impact: Metrics, Strategies, Ethical considerations.	International	Holy Cross College (Autonomous) , Tiruchirappalli – 620002 23 <sup>rd</sup> September 2023

### Projects Undertaken :

Government / Private	Details
Government UGC – STRIDE Component – 1 Project	<p>“ONE CLICK SUSTAINABLE CHANGE: CONNECTING LOCAL BUYERS AND LOCAL SELLERS”</p> <p><b>Copy right received for the WINKEL APP</b></p> <p><b>The copyright Registration Number is 11258/2022-CO/SW</b></p>

**Resource Person :**

- Judge for the event: “Math Bee”, Holy Angel Nursery & Primary School, Tiruchirappalli
- Delivered a lecture on the topics “Functions and its types” in Workshop on Conceptual Mathematics Organized by PG Department of Mathematics, Gonzaga College of Arts and Science for Women, Krishnagiri
- Judge for the event: Rangoli , St.Joseph’s College (Autonomous), Tiruchirappalli

**Responsibilities:**

<b>Academic Year</b>	<b>Details</b>
2015-2016	NSS officer (Shift II)
2017-2018	Coordinator of Come Alive (Shift II)
2018-2019	Coordinator of Come Alive (Shift II)
2018-2019	Assistant Staff Secretary (Shift II)
2019-2020	Staff Secretary (Shift II)
2022-2024	Coordinator of Gender Champion Club
2020- Till date	Core member of NAAC Parameter II (Teaching , Learning and Evaluation )
2024 – Till date	Coordinator of Innovation Club

**E-lessons developed:**

<b>S.No</b>	<b>Title of e-lessons</b>
<b>1.</b>	<b>Functions</b>
<b>2.</b>	<b>Vector Spaces</b>
<b>3.</b>	<b>Fuzzy Sets</b>
<b>4.</b>	<b>Sequences of Real Numbers</b>

**Fields of Specification under the Subject / Discipline:**

1. Operations Research
2. Fuzzy Set Theory

**Subjects specialized in Teaching : (UG,PG)**

1. Real Analysis
2. Algebra
3. Statistics
4. Fuzzy Mathematics
5. Graph Theory

**Personal Details:**

Name : A. Saranya  
Father's Name : S. Arumugam  
Date of Birth : 02.08.1990  
Gender : Female  
Nationality : Indian  
Religion : Hindu  
Residential Address : 10, North Kallukara Street, Palakarai, Tiruchirappalli – 620001  
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