



1. Name (Block Letters) : Mrs. R. Sumathi
2. Designation : Assistant Professor
3. D.O.J : 20.08.2018
4. Mobile Number : 9941562915
5. Mail ID : sumathi@mannarcollege.ac.in
6. Field of Specialization : Graph Theory
7. Qualification : M.Sc., M.Phil., (Ph.D)

Ph.D Registered (year) : 2020

SET/NET passed (year) : 2017

8. Teaching Experience

Till this year : 22 years 10 months

a. UG : 22 years 10 months

b. PG : 17 years 10 months

9. Grants received from Government & Non-government sources such as industry, corporate houses, international bodies, endowments etc...: 1

- Project Co-ordinator and organized National Mathematics Day Celebration on 21st & 22nd December 2022 Funded as a sum of amount 2 lakhs by National Council for science and Technology Communication (NCSTC), Tamilnadu State Council for Science and Technology.

10. Details of Seed Money received from the institution for institutional sponsored Faculty / Interdepartmental / Students Project :1

- Received Rs. 20, 000/- for the Seed Money Project titled “A New Domination-Vedic Perspective in Medical Image Processing” during 2020.

11. Papers Presented in Conferences / Seminars :

- Presented a paper titled “Computer Aided Skin Disease Detection and Classification” in the National E-Conference On Hardware Security- NCHS20 organized by AVIT, Chennai during 25.06.2020 & 26.06.2020.

- Presented a paper titled “An Effective Automatic Skin Disease Identification Using Vedic Maths” in the International Conference On Applied Mathematics & Civil Structures (ICAMCS 2021) organized by Department Of Mathematics & Department Of Civil Engineering, Sri Sivasubramaniya Nadar College Of Engineering, Chennai during 12.02.2021 & 13.02.2021.
- Presented a paper titled “A Relative Study Of Real World Complex Networks Using Heatmap Centrality” in Two-Day International Conference On Exploration Of Contemporary Mathematical Sciences – 2022 (ICECMS – 2022) organized by Department Of Mathematics(CA), Mannar Thirumalai Naicker College, Madurai during 17/03/2022 & 18/03/2022.
- Presented a paper titled “A Study on Point Set Domination in Graphs” in the Conference On “Recent Trends In Graphs And Networks In Digital World” organized by Department Of Mathematics, HKRH College, Uthamapalayam on 03.03.2023.
- Presented a paper titled “Accurate Point Set Distribution and Connected Accurate Point Set Distribution” in the National Conference on “Applications of Mathematics in Digital Era” organized by Department Of Mathematics, HKRH College, Uthamapalayam on 06.10.2023.
- Presented a paper titled “Analysis of Water Distribution Networks using Heatmap Centrality Measure” in the National Conference On “Recent Advancements in Pure and Applied Mathematics (RAPAM-2024)” organized by PG and Research Department Of Mathematics, Mannar Thirumalai Naicker College, Madurai during on 15.03.2024.
- Presented a paper titled “Strong Split Point Set Domination and Super Point Set Domination in Graphs” in the National Conference On “Recent Advancements in Pure and Applied Mathematics (RAPAM-2024)” organized by PG and Research Department Of Mathematics, Mannar Thirumalai Naicker College, Madurai during on 15.03.2024.

12. Details of Paper Publications:

- A Study On Facts, Causes And Consequences Of Divorce Using Fuzzy Cognitive Maps in International Journal of Engineering Research and Technology, ISSN 2278-0181, IJAMM-2501, August 2013.
- Preferring old age home: A Fuzzy Approach using Extended, Mathematical Sciences International Research Journal, ISSN 2278-8697, Vol – 3, Issue 2, Pg.No.694 – 697, 2014.
- A new fuzzy clustering method based on fuzzy equivalence relation, IPASJ International Journal of Computer Science, ISSN 2321-5992, Vol – 3, Issue 2, Pg.No.694 – 697, December 2014.

- Application of Three estimates Fuzzy TOPSIS [TEFTOPSIS] Method using Pentagonal Fuzzy Number in Analysing the Causes for increase in Old Age Home, International Journal of Advanced Research in Computer Science, ISSN 0976-5697, Vol -6, Issue 2, p77-83, Mar/Apr2015.
- Predominant Factor Prediction To Accelerate Growth Of Quick-Service Restaurants (QSR), International Journal of Scientific & Technology Research, ISSN 2277-8616, Volume 9, Issue 04, April 2020.
- An Effective Automatic Breast Cancer Identification using Vedic Mathematics, Materials Today: Proceedings – Elsevier, ISSN 2214-7853, Volume 47, Part 1, 2021, Pages 247-250, 2021.
- Challenges Faced by the Food Industry under Franchising Sector, Materials Today: Proceedings – Elsevier, ISSN 2214-7853, Volume 55, Part 2, 2022, Pages 299-305, 2022.
- Maximal point set domination in graphs, Discrete Mathematics, Algorithms and Applications, <https://doi.org/10.1142/S1793830924500149>
- Analysis of Water Distribution Networks using Heatmap Centrality Measure, Indian Journal of Natural Sciences, ISSN: 0976 – 0997, Vol.15 / Issue 84 / Jun / 2024.

13. Chapters in edited volumes :

- Chapter Women Mathematicians in 21st Century, Women in 21st Century, Neithal Pathippagam, Chennai, ISBN 978-93-90687-63-3, 2021.

14. Special Address Delivered :

- Delivered a lecture on Speed and Mind Math Tricks, in Three Days State Level Technical Workshop “Math Teachers Training Through Low Cost Teaching Aids”, jointly organized by National Council for Science and Technology Communication, TamilNadu State Council for Science and Technology, MannarThirumalaiNaickar College, Madurai on 07.07.2022

15. Details of Workshops / Seminars / Conference attended :

S.No	Name of the Programme	Name of the Institution	Date
1.	Mathematical Methods & Fuzzy Applications	Jamal Mohamed College	27/02/2006
2.	Patent Awareness	Mohamed Sathak Engineering College	5/04/2006
3.	Recent Trends in Advanced	Easwari Engineering College	15/10/2010

	Mathematics		
4.	Computational Methodologies in Statistics	Pondicherry University	19/01/2011 to 21/01/2011
5.	Applied Multivariate Statistical Analysis using SPSS and AMOS	Presidency College	4/03/2011 & 5/03/2011
6.	Using Sage For Engineering Mathematics	VIT	28/04/2012
7.	Discrete Mathematics	Tagore Engineering College	7/09/2012
8.	Recent Advances in Mathematics and its Applications	Loganatha Narayanasamy Government College	13/12/2012 & 14/12/2012
9.	Probability and Queueing Theory	KCG College of Technology	15/10/2014 & 16/10/2014
10.	Fuzzy Theory and its Applications	KCG College of Technology	24/07/2018 & 25/07/2018
11.	Discrete Mathematics and Graph Theory	Sairam Institute of Technology	25/07/2018
12.	Graph theory and Discrete Mathematics	KCG College of Technology	Aug 2015
13.	Outcome Based Education	KCG College of Technology	30/06/2016 & 01/07/2016
14.	Values and Spirituality for EXCELLENCE in Teaching Profession	HappyVillage Retreat Center	09/07/2016 & 10/07/2016
15.	Quantitative Aptitude Training	KCG College of Technology	28/08/2016
16.	IOT training on Intel Galileo board	KCG College of Technology	Nov 2016
17.	International Conference on “Revolutionary Trends in Mathematical	Mannar Thirumalai Naicker College, Madurai	14.12.2018-15.12.2018

	Sciences”		
18.	Technicalities of Writing Research Proposal	Mannar Thirumalai Naicker College, Madurai	29.06.2019
19.	Outcome Based Education	Mannar Thirumalai Naicker College, Madurai	28.08. 2019
20.	Research writing and Publication: Theory and Practice	Mannar Thirumalai Naicker College, Madurai	19.10.2019
21.	National Seminar on “Applied Mathematics & IPR”	Mannar Thirumalai Naicker College, Madurai	20.12.2019
22.	Promotion of API Score and CAS requirements	Mannar Thirumalai Naicker College, Madurai	03.03.2020
23.	Self-Development	Sri Sarada Niketan College of Science for Women, Karur	20/04/2020 & 21/04/2020
24.	Creation of E-Content, Animated E-Content, Stop Motion Animation, Editing E-Content, Creating Interactive E-Content and Uploading E-Content on the Web.	Universal Teachers Academy, Puducherry, India	21/4/ 2020 - 30/4/ 2020
25.	Research Outcomes: Technical Paper writing, Research Proposal, Patent Filing	The Data Tech.ai	22/4/2020
26.	Covid -19 Pandemic General Awareness Quiz	Potti Sriramulu Chalavadi Mallikarjuna Rao College of Engineering & Technology, Vijayawada, Andhra Pradesh	26/4/2020
27.	Online Assessment on Improve your Skills	Virudhunagar Hindu Nadars’ Senthikumara Nadar College, Virudhunagar	27/4/ 2020 – 29 /4/2020
28.	Online College Management & Online Content Creation Tools	BMM & BAMMC Department of Lala Lajpati Rai College of Commerce & Economics and University of Mumbai with North Storm Academy	30/4/2020 – 2/5/2020
29.	Online Quiz Competition on Effective Teaching – 2020	S.S. Duraisami Nadar Mariammal College, Kovilpatti	3/5/2020
30.	Documentation using LATEX	Arasu College of Arts & Science for Women, Karur	4/5/2020
31.	Data Analysis & Visualisation of COVID-19	Jerusalem College of Engineering, Chennai	7/5/2020
32.	E-Quiz on Impact of COVID-19 on Global Economy	Khadir Mohideen College, Thanjavur	11/05/2020

33.	Mathematics E-Quiz	Sengunthar Arts and Science College, Namakkal	25/5/2020
34.	Positive Thought and the Ideal Life	Mannar Thirumalai Naicker College, Madurai	28.05.2020
35.	Algebraic Graph Theory	Government Arts College for Men, Nandanam, Chennai	1/6/2020
36.	E-Quiz on Mathematics	Rohini College of Engineering & Technology, Kanyakumari.	03/06/2020
37.	Mathematical Analysis	Loyola College, Chennai	08/06/2020 – 13/06/2020
38.	Fuzzy Logic and It's Applications	Rohini College of Engineering & Technology, Varyoor, Kanyakumari	12/6/2020
39.	E-Quiz on Graph Theory	The Madurai Diraviyam Thayumanavar Hindu College, Tirunelveli	13/6/ 2020 & 14/6/2020
40.	Application of Stochastic Process in Real World Problems and Graph Theory in Secured Data Transmission	Sri Akilandeswari Women's College, Wandiwash, Thiruvannamalai	16/6/2020
41.	Graph Embedding	Don Bosco College of Arts and Science, Keela Eral, Thoothukudi	16/6/2020
42.	Fuzzy Mathematical Modelling	St. Joseph's College of Engineering, Chennai	16/6/ 2020 - 17/6/2020
43.	Edge Colouring in Graphs	Pope's College, Samyerpuram	18/6/2020
44.	Recent Trends in Graph Theory	Government Arts College, Ramanathapuram	22/06/2020 – 24/06/2020
45.	Coloring of Graphs	Tirumala Engineering College, Guntur, Andra Pradesh	26/6/2020
46.	Recent Trends in Mathematical Modelling	Mannar Thirumalai Naicker College, Madurai	27/06/2020
47.	Basic Graph Theory with GRIN	Rajalakshmi Engineering College, Chennai	1/07/2020
48.	Graph Theory and its Applications	Islamiah Women's Arts and Science College, Vaniyambadi.	2/07/2020 - 3/07/2020
49.	Rough Set: A Tool for Qualitative Knowledge Data Discovery	Yadava College, Madurai	4/07/2020
50.	Blended Learning and Mathematical Relevance to Real World Applications	Anwarul Uloom College, Hyderabad, Telangana.	05/07/2020
51.	Applications of Number Theory and Cryptography	Chaitanya Bharathi Institute of Technology, Hyderabad, Telangana.	08/07/2020
52.	Soft_Computing by Soft Sets	Don Bosco College of Arts and Science, Thoothukudi.	10/07/2020
53.	Statistical Analysis As An Interface In Engineering Problems	Chaitanya Bharathi Institute of Technology, Hyderabad, Telangana.	13/07/2020
54.	Discrete Mathematics	SSN College of Engineering, Chennai	08/08/2020

55.	Conference Emerging Trends in Vedic Mathematics & Application in Science, Technology & Social Science Research	Special Centre for E-Learning Jawaharlal Nehru University, New Delhi	16.08.2020 & 17.08.2020
56.	Conference on “Graph Labelling and Application”	Goa University, Goa	17.09.2020 - 19.09.2020
57.	Online webinar	MannarThirumalai Naicker College, Madurai	23.07.2021
58.	National Conference on Present Scenario in Mathematical Research	Mannar Thirumalai Naicker College , Madurai	22.04.2022
59.	Faculty Enhancement Programme on Education 4.O for Sustainable Economic Development	MannarThirumalai Naicker College, Madurai	27.04.2022
60.	A Seven Day Online Faculty Development Programme on Enhancing Quality by unearthing Innovative Practices-EQUIP 2022	MannarThirumalai Naicker College, Madurai	18.04.2022 to 24.04.2022
61.	Two days In-service Teacher Training programme	Sri Meenakshi Government Arts College for Women, Madurai	05.05.2022 & 06.05.2022
62.	National Conference on Current Trends in Applied Mathematics & IPR	Mannar Thirumalai Naicker College , Madurai	07.10.2022
63.	Insights of National Educational Policy	Mannar Thirumalai Naicker College , Madurai	18.03.2023
64.	Recent Trends in Graphs and Networks in Digital World.	Hajee Karutha Rowther Howdia College , Uthamapalayam	30.03.2023
65.	National Virtual Workshop on Machine Learning: An Ice Breaker Between Materials Research and Data Science	SSN Research Centre, SSN Institutions Chennai.	12.04.2023 & 13.04.2023
66.	State Level Technical Workshop on Intellectual Property rights	Mannar Thirumalai Naicker College, Madurai	16.10.2023 & 17.10.2023

16. Details of Professional development Programmes attended :

S. No	Name of the Professional Development Programme	Date and No. of Days	Name and address of the Institution imparting training
1.	Refresher Course on "Mathematics"	14 days, 04.02.2022 – 17.02.2022	UGC, HRDC, University of Kerala, Trivandrum
2.	Faculty Induction Programme	30 days/ 18.11.2020 to 17.12.2020	UGC- HRDC ,Bharathidas an University, Trichy
3.	Faculty Development Programme on "Promotion of API Score and CAS Filling"	1 day/ 02.03.2019	Mannar Thirumalai Naicker College, Madurai
4.	Outcome Based Curriculum	1 day/ 09.03.2019	IQAC, MTNC
5.	Faculty Induction Programme	One month /23.4.19–22.5.19	Gandhigram Sural Institute, Gandhigram
6.	E-content Development and Digital tools usage	1 day/29.02.2020	IQAC, MTNC
7.	21 st Century Skills	1 day/05.03.2020	IQAC, MTNC
8.	Quality Assurance and Sustenance in Higher Education	1 day/11.03.2020	IQAC, MTNC
9.	Faculty Enrichment Program	1 week / 13.5.20 to 19.5.20	IQAC, MTNC
10.	Faculty Development Programme on "R Programming"	3 days /14.05. 2020- 16.05.2020	Sona College of Technology and Spoken Tutorial Project, IIT Bombay & MHRD Govt. of India
11.	Training on "LaTeX"	15.05.2020	Sree Narayana Guru College and Spoken Tutorial Project, IIT Bombay & MHRD Govt. of India
12.	Faculty Research Program: Dynamics in Research Publications	2 days / 15 & 16.09.2022	IQAC, MTNC
13.	Latex	18 th – 23 rd July 2022.	IQAC & Department of Commerce ,SSC College of Arts and Commerce, Ulhasnagar, Thane

14.	Dynamics on Research Publications	15&16 th September 2022	IQAC & Research Committee, MTNC
15.	Two days In-service Teacher Training programme	05.05.2022 & 06/05/2022	Sri Meenakshi Government Arts College for Women, Madurai
16.	Modern Algebra	12 Weeks / March 2021	SWAYAM ONLINE COURSE, MKU
17.	Advanced Graph Theory	8 Weeks/ April 2022	IIT, Patna- NPTEL

17. Conferences, Seminars, Workshops and other Programmes Organized:

S. No	Date	Name of the Programme	Role	Name of the Institution
1.	15/10/2014 & 16/10/2014	State Level Two day FDP on “Probability and Queueing Theory”	Organizing Secretary	KCG College of Technology, Chennai
2.	24/07/2015 & 25/07/2015	National Conference on Fuzzy Theory and Applications	Organizing Secretary	KCG College of Technology, Chennai
3.	30/06/2016 & 1/07/2016	Two days FDP on Graph theory and Discrete Mathematics	Organizing Secretary	KCG College of Technology, Chennai
4.	29/06/2018	One day workshop on Linear Algebra	Convenor	KCG College of Technology, Chennai
5.	20.12.2019	National Seminar on Applied Mathematics & IPR	Co-Convenor	Mannar Thirumalai Naickar College, Madurai
6.	16.03.2020	One Day Hands– on Workshop on “Research Documentation Using LaTeX”	Convenor	Mannar Thirumalai Naickar College, Madurai
7.	23.07.2021	International Webinar on “ Data Science In E-commerce”	Convenor	Mannar Thirumalai Naickar College, Madurai
8.	22.03.2022	Seminar on “Global Trends in Mathematical Modeling and Patent Filing”	Convenor	Mannar Thirumalai Naickar College, Madurai
9.	22.12.2022	Celebration of “National Mathematics Day”	Convenor	Mannar Thirumalai Naickar College, Madurai
10.	22.02.2024	MATH MAESTRO 2024” - Intercollegiate Meet	Organizing Secretary	Mannar Thirumalai Naickar College, Madurai
11.	15.03.2024	Recent Advancements in Pure and Applied Mathematics (RAPAM-2024)	Organizing Secretary	Mannar Thirumalai Naickar College, Madurai

18. Other Services Rendered in the College :

S. No	Name of the Activity	Period
1.	Handled Certificate Course “Vedic Mathematics-I”	2019-2020 & 2021-2022
2.	Member of Career Guidance, Placement Cell and Centre for Competitive Examinations	2019-2020, 2020-2021
3.	Member of Attendance Monitoring Committee	2019-2020, 2020-2021 & 2022-2023
4.	In charge for the Department Student Activities	From September 2018 to till date
5.	Coordinator for Counselling and Psychotherapy (Community College)	2020-2021
6.	Member of ECO Club	2021-2022 & 2022-2023
7.	Member of Women’s Development Cell	From July 2023
8.	Convenor of Internship Cell	From July 2023
9.	Member of Research Committee	From July 2023

OTHER PARTICULARS

S.No	Stock Verification Committee	Position	Year
1.	Physics Laboratory	Member	2018-2019
2.	Physical Education	Member	2019-2020
3.	Chemistry Laboratory	Member	2020-2021
4.	Chemistry Laboratory	Convener	2021-2022
5.	Library	Member	2022- 2023 & 2023-2024

21. Membership in Academic / Professional Bodies

S.No	Name of the Body	Capacity
1	ISTE	Lifetime

Signature of the Faculty