

**Name** : Dr.P.M.Mahalakshmi

**Designation** : Assistant Professor

**Department** : Mathematics (PG)

**Qualification** : M.Sc., M.Phil., Ph.D.

**Experience** : Teaching -14 Years

**Research** : 5 Years

**Area of Specialization(s)** : Topology & Graph Theory

**Email (Official ID)** : mahalakshmipm@psgrkcw.ac.in



#### Academic Qualifications

Degree	Branch	Institution/University Name	Year of Graduation
Ph.D.	Mathematics	Bharathiar University	2021
M.Phil.	Mathematics	PSGR Krishnammal College For Women	2009
M. Sc.	Mathematics	L.R.G.Government Arts College For Women	2007
B.Sc.	Mathematics	L.R.G.Government Arts College For Women	2005

#### Additional Qualifications

Diploma/ Vocational/ Certification	Area of Specialization	Institution/University/Agency Name	Year
Certification	Computer-Cum-Internet Literacy Programme	Directorate of Collegiate Education, Department of Higher Education, Govt. of Tamilnadu.	2003
Certification	What is Data Science	IBM	2023
Certification	Data Science Methodology	IBM	2023
Certification	IBM Data Topology	IBM	2022

#### Research Publication (Indexed)

- Mahalakshmi P M and Thangavelu P, **M- Connectedness in M-Topology**, *International Journal of Pure and Applied Mathematics*, 106(8) (2016), 21-25.
- Mahalakshmi P M and Thangavelu P, **Properties of Multisets**, *International Journal of Innovative Technology and Exploring Engineering*, 8(5S) (2019), 330-333.
- Mahalakshmi P M and Thangavelu P, **Root Open and Root Closed Multisets**, *Journal of Physics: Conference Series*, 1543(2020), 1-10.

#### Other Publications: International/National

- P.M.Mahalakshmi, Multiset Connectedness in a Multiset Topological Space, Proceedings of the National Conference on Ramanujan's Contributions and Recent Trends in Mathematics.
- Dr.P.M.Mahalakshmi, Application of Topological Gradient Method in Skin Lesions using Edge Detection, Proceedings of the International Conference on Algebraic Graph Theory, Graph Theory and Topology, ISBN: 978-93-48505-23-1, 51-59.
- Dr.P.M.Mahalakshmi, Application of Gauss Elimination Method and Kirchoff's Theorem on Electrical Circuit using Python, Proceedings of the International Conference on Algebraic Graph Theory, Graph Theory and Topology, ISBN: 978-93-48505-23-1, 60-67.
- Dr.P.M.Mahalakshmi, Application of Linear Programming for Optimal Use of Raw Materials in making a traditional sweet Adhirasam, Proceedings of the International Conference on Algebraic Graph Theory, Graph Theory and Topology, ISBN: 978-93-48505-23-1, 68-75.
- Dr.P.M.Mahalakshmi, New Approach to Assignment Problem using Play Fair Cipher Method, Proceedings of the International Conference on Algebraic Graph Theory, Graph Theory and Topology, ISBN: 978-93-48505-23-1, 90-97.
- Dr.P.M.Mahalakshmi, Graph Based Secure Communication in Cryptography, Proceedings of the International Conference on Algebraic Graph Theory, Graph Theory and Topology, ISBN: 978-93-48505-23-1, 98-105.

#### Book Chapter Published

- Published a Chapter "Artificial Intelligence in Blood Bank" in the Edited Book "Artificial Intelligence Emerging Challenges and Opportunities in Industry 4.0 Era" on 14<sup>th</sup> June 2023 with ISBN Number:978-81-960301-4-8.

**Short Term Course** - Completed 2-Week Entrepreneurship Course by Turnip Innovations in 2022.

### Paper Presentations in Conference

- Presented a Paper titled “**Multiset Connectedness in a Multiset Topological Space**” in the National Level Conference at Madurai Kamaraj University on Dec 21<sup>st</sup> – 23<sup>rd</sup>, 2015.
- Presented a Paper titled “**M Connectedness in M Topology**” in the National Level Conference at RVS Technical Campus, Coimbatore on 20<sup>th</sup> Feb 2016.
- Presented a Paper titled “**Root Open and Root Closed Multisets**” in the International Level Conference at Kongunadu Arts & Science College, Coimbatore on 30<sup>th</sup> -31<sup>st</sup> Jan 2020.

### Presentations in Seminar

- Presented a paper titled “**Role of integer Modulo 7**” in the National Level Seminar on 29<sup>th</sup> Jan 2008 at Nirmala College for Women, Coimbatore.

### Participation in Conference

- Participated in the International Conference On “**Recent Trends in Theoretical & Computational Mathematics**” organized by PSGRKCW from 24/2/2022 to 25/2/2022.
- Participated in the National Level Conference on “**Recent Trends in Pure & Applied Mathematics**” at Rathinam College of Arts & Science on 04<sup>th</sup> Sep 2015.
- Participated in the Five Days Online International Conference On “**Innovative Challenges in Multidisciplinary Research and Practices**” organized by Hindusthan College of Arts and Science from June 15<sup>th</sup> -19<sup>th</sup>, 2020.

### Participation in Seminar

- Presented a paper titled “**Role of integer Modulo 7**” in the National Level Seminar on 29<sup>th</sup> Jan 2008 at Nirmala College for Women, Coimbatore.

### Participation in Workshop

- Participated in the Workshop on “**Nurturing Critical & Creative Thinking for Enhanced Intellectual Agility**” at PSGR.Krishnammal College for Women, Coimbatore on 4/3/2024.
- Participated in the International Workshop on “**Cyber Security-2023**” at Dwaraka Doss Goverdhan Doss Vaishnav College from 7/8/2023 to 22/8/2023.
- Participated in the Workshop on “**Mathematical Modelling for Engineering Applications**” at Jeppiaar Institute of Technology on 27/2/2023.
- Participated in the Training Workshop on “**Cross-Discipline Platforms: Scopus, Science Direct and Mendeley**” organized by MTTT on 11/3/2022.
- Participated in the State Level Workshop on “**Latex Document Preparation**” during 28<sup>th</sup> Sep 2007 at Kongunadu Arts & Science College, Coimbatore.
- Participated in Science Academies ‘Refresher Course on **Theoretical and Computational Fluid Dynamics**’ during 27<sup>th</sup> Aug – 8<sup>th</sup> Sep 2012 at PSGR.Krishnammal College for Women, Coimbatore.
- Participated in the One Day Workshop on **Journey of Transforms in Engineering** at KPR Engineering and Technology, Coimbatore on 31<sup>st</sup> Oct 2012.
- Participated a Workshop on “**Latex-A Tutorial Perspective for Effective Journal Writing Using Latex**” at RVS Technical Campus-Coimbatore on 11<sup>th</sup> Feb 2016.

### Participation Guest Lecture

- Participated an International Guest Lecture on “**What is Gaussianity in Non Commutative Probability? and ,Why do we care**” at SRMIST on 29/11/2024.
- Participated an online Guest Lecture on “**QSPR Analysis of Medicinal drugs by involving Topological Indices**” at Dr.M.G.R. Educational Institute and Research Institute on 5/3/2024.

### Participation in Faculty Development Programme

- Participated an online FDP on “**Embedded system & IoT Tools for Real World Applications**” organized by Alpha College of Engineering from 14/7/25 to 19/7/25.
- Participated an online FDP on “**Mathematical Foundations of Artificial intelligence and Machine Learning**” organized by Sacred Heart College from 3/2/25 to 7/2/25.
- Participated in the International Faculty Development Programme on “**Futuristic Pathways in Technology and Computational Methodologies**” at Mary Matha College of Arts and Science between 6/1/25 to 11/1/2025.
- Participated in the virtual Faculty Development Programme on “**Recent Frontiers in Pure & Applied Mathematics**” at Kongunadu Arts and Science College between 11/11/24 to 15/11/24.
- Participated in the virtual Faculty Development Programme on “**Adapting to AI Driven Industry**” at Rajapalayam Rajus College between 9/9/24 to 13/9/24.
- Participated in the virtual Faculty Development Programme on “**Mathematics & its Application**” at PSGR Krishnammal College for Women between 11/3/24 to 15/3/24.
- Participated in the virtual Faculty Development Programme on “**E-Content Development**” at Sri G.V.G.Visalakshi College For Women from 12/2/24 to 16/2/24.
- Participated in the national Virtual Faculty Development Programme on “**Research Methodology: Ethics & Publications**” at Theivanai Ammal College for Women from 22/1/24 to 26/1/24.
- Participated in the Virtual Faculty Development Programme on “**Empowering Educators: Strategies for Holistic Teaching & Professional Growth**” at Sri Malolan College of Arts & Science from 18/12/23 to 22/12/23.

- Participated in the Virtual Faculty Development Programme on “**Recent Trends in Mathematics & Technology**” at OP Jindal University, Raigarh from 9/10/23 to 13/10/23.
- Participated in the Faculty Enhancement Programme conducted by KCW from 11/9/23 to 15/9/23.
- Participated in the Virtual Faculty Development Programme on “**Recent advances in Applied Mathematics**” at Sri Manakula Vinayagar Engineering College from 4/9/23 to 8/9/23.
- Participated in the Virtual Faculty Development Programme on “**Research Insights for Academic Excellence**” at KPR College of Arts Science & Research from 3/8/23 to 8/8/23.
- Participated in the International Virtual Faculty Development Programme on “**Frontiers of Mathematics**” at SRMIST from 5/7/23 to 19/7/23.
- Participated in the National Level Virtual Faculty Development Programme on “**Mathematical Modelling for Business Analytics**” at Suguna College of Arts & Science on 21/5/2022.
- Participated in the National Level Virtual Faculty Development Programme on “**Effective Teaching & Learning Methodologies for Differential Equations**” at PSGRKCW from 25/4/2022 to 27/4/2022.
- Participated in the International Virtual Faculty Development Programme on “**Next Generation: Key Trends, Challenges& Opportunities**” at SRMIST from 18/4/2022 to 23/4/2022.
- Participated in the National Level Virtual Faculty Development Programme on “**Plagiarism in Academic Research & Author Identifiers**” at Indian Institute of Management & Commerce from 11/4/2022 to 12/4/2022.
- Participated in the Virtual Faculty Development Programme on “**Mathematics for a better World**” at Gates Institute of Technology from 21/3/2022 to 26/3/2022.
- Participated in the Virtual Faculty Development Programme on “**R Studio- A Tool for Projects on Biostatistics**” at Sri Sarada College for Women on 30/3/2022.
- Participated in the Virtual Faculty Development Programme on “**Computational Tools for Research in Mathematics**” at Sagar Group of Institutions on 19/2/2022.
- Participated in the Faculty Development Programme on “**Probability and Queueing Theory**” at Sri Eshwar College Of Engineering, Coimbatore during 29<sup>th</sup> Nov-2<sup>nd</sup> Dec 2012.
- Attended the One Day Faculty Development Programme on “**Empowering Mathematics Skills for Engineering mathematics**” at Anna University, Chennai on 26<sup>th</sup> July 2013.
- Participated in the **Bridge course on Mathematics** conducted on 23<sup>rd</sup> & 24<sup>th</sup> June 2014 at Anna University, Chennai.
- Attended the One day Faculty Development Programme on “**Pedagogy in mathematics**” at St. Mother Theresa Engineering College, Thoothukudi on 19<sup>th</sup> & 20<sup>th</sup> June 2015.
- Attended the National Level Faculty Development Program on “**How to Crack CSIR-NET & SET in Mathematics**” organized by Dr.N.G.P.Institute of Technology, Coimbatore from June 24<sup>th</sup> -26<sup>th</sup>, 2020.

#### Participation in Webinar

- Participated in the National Virtual Seminar on “**Recent Progress in Mathematical Science**” at Government Engineering College, Bhojpur on 14/3/2024.
- Participated in the National Virtual Seminar on “**Holistic & Multidisciplinary Approach Towards National Higher Education Quality Framework**” at Cauvery College for Women on 5/7/2023 to 6/7/2023.
- Participated an International Virtual webinar on “**Mathematics of Computer Vision**” at Maharishi Markandeshwar (Deemed to be University), Mullana-Ambala on 28/4/2022.
- Participated an International Virtual webinar on “**Elliptic Zeta Function**” at Theivanai Ammal College for Women on 3/3/2022.
- Participated an International Virtual webinar on “**Mathematical Principles. Challenges & Innovations in Intelligent Systems**” at Coimbatore Institute of Technology from 23/2/2022 to 24/2/2022.
- Participated in the Virtual webinar on “**Essentials of Mathematics for Machine Learning**” at Government Ars College, Udhamandalam on 6/8/2021.
- Attended the Online Webinar on “**How easily all of u can crack TNPSC Exams & Become A Prestigious Government Officer?**” organized by Rathinam Technical Campus, Coimbatore on 23<sup>rd</sup> June 2020.
- Participated in the Online Webinar on “**Exposure to SageMath**” organized by St. Joseph’s Institute of Technology, Chennai on 30<sup>th</sup> June 2020.
- Participated in the National Webinar on “**Mathematics: Fear, Friend and Challenge!**” organized by Indira Gandhi National Tribal University, Amarkantak, Madhya Pradesh on 30<sup>th</sup> June 2020.

#### Conference/Seminar/Workshop/ FDP Organized

- Exploring New Frontiers in Pure and Applied Mathematics: Unraveling Complexity Jointly organized with CHIRD from 24<sup>th</sup> February to 3<sup>rd</sup> March 2025.

#### Membership in Professional Bodies

Name of the Professional Body	Nature of membership	Duration
Indian Society for Technical Education	Lifetime	

## **Indexing and Citations**

Citations – 65

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## **Contribution**

- Working as a Head of the Department for Science and Humanities Department in the period 2012-2017(SCAD IT).
- Department Alumni coordinator in the academic year 2023-2024.
- Department CIIED coordinator in the academic year 2023-2024.
- Department Karishma coordinator in the academic year 2023-2024.
- Admission coordinator in the academic year 2024-2025.
- Department Association In-charge in the academic year 2024-2025.
- Department BOS Member.