

NIRMALA COLLEGE FOR WOMEN (AUTONOMOUS)

COIMBATORE

STAFF PROFILE

NAME : Dr. W. Maria Therease Ramya
DESIGNATION : Assistant Professor
DEPARTMENT : Physics
QUALIFICATION : M.Sc., B.Ed., M. Phil., Ph. D.,
EXPERIENCE : 13 years 6 months
AREAS OF SPECIALIZATION : Solid State Physics
E-MAIL : dewdropmaria@gmail.com
ACADEMIC QUALIFICATIONS :

DEGREE	YEAR OF COMPLETION	NAME OF THE INSTITUTION	CLASS
Ph.D	April 2025	Government Arts College, Coimbatore, Bharathiar University	Completed
M. Phil. Physics	Aug 2012	Karpagam University	First Class
B.Ed. Physics	June 2011	Sri Kalaivani College of Education.	First Class with Distinction
M.Sc. Physics	Apr 2010	Karpagam Arts & Science, College, Bharathiar University	First Class with Distinction
B. Sc. Physics	Apr 2006	Shri Nehru Maha Vidhyalaya College of Arts & Science, Bharathiar University	First Class with Distinction
Higher Secondary	Apr 2003	Nirmala Matric. Hr. Sec. School, Board of School Examinations	First Class
S. S. L. C	Apr 2001	Nirmala Matric. Hr. Sec. School	First Class with Distinction

RESEARCH PUBLICATIONS:

INTERNATIONAL:

- [1] Ramya, W. M. T., Siva, V., Murugan, A., Shameem, A., Kannan, S., & Venkatachalam, K. (2022). A Novel Biodegradable Polymer-Based Hybrid Nanocomposites for Flexible Energy Storage Systems. In Journal of Polymers and the Environment (Vol. 31, Issue 4, pp. 1610–1627). Springer Science and Business Media LLC.
<https://doi.org/10.1007/s10924-022-02695-9>

- [2] Ramya, W. M. T., Venkatachalam, K., Murugan, A., Jothi, M. A., & Thangarasu, S. (2024, September 30). Flexible PVP/PEO/MnO₂ Polymer Nanocomposites based Cathode Material for Asymmetric Supercapacitor. Asian Journal of Chemistry. Asian Journal of Chemistry. Retrieved from <http://dx.doi.org/10.14233/ajchem.2024.32553>
- [3] Maria Therease Ramya, W., Siva, V., Murugan, A., Shameem, A., Anandha Jothi, M., Hussien, M., Venkatachalam, K., et al. (2025, March). Nanoscale V₂O₅ anchored biodegradable PVP/PEO based polymer nanocomposites for flexible supercapacitor applications. Journal of Molecular Liquids. Elsevier BV. Retrieved from <http://dx.doi.org/10.1016/j.molliq.2025.126908>
- [4] Ramya, W. M. T., Siva, V., Murugan, A., Thangarasu, S., Jauhar, R. O. M., Al-Sehemi, A. G., et al. (2026). Design and construction of nanoscale CeO₂ wrapped polymer nanocomposites with improved electrochemical properties. Discover Materials. <https://doi.org/10.1007/s43939-026-00555-0>

NATIONAL:

- [1] Nandhini, R., Tamilselvi, D., Rathidevi, K., & Ramya, W. M. T. (2022). The study on structural, vibrational and morphological analysis of L-tryptophan-Fumaric acid nanofibers. AIP Conference Proceedings. Presented at the 8th Annual International Seminar on Trends in Science and Science Education (AISTSSE) 2021, AIP Publishing. Retrieved from <http://dx.doi.org/10.1063/5.0108193>

PRESENTATIONS IN CONFERENCE:

INTERNATIONAL:

- [1] International Conference from 19.05.2021 to 21.05.2021 on the topic, Sustainable Materials and Technologies for Bio and Energy Applications organized by Sri Sivasubramaniya Nadar College of Engineering, Kalavakkam-603110

- [2] "International Conference on Advanced Materials for Energy and Environment Sustainability (ICAME²S-2025) March 6, &7 ("Nanosized V₂O₅ decorated biodegradable PVP/PEO based polymer nanocomposites for flexible supercapacitor applications"
- [3] International Conference on Materials, Manufacturing and Mechanical Engineering (ICMMMM 2022): Presented a research paper titled "Development of Fe₂O₃ anchored polymer nanocomposites as a high-performance electrode material for energy storage application".

PARTICIPATION IN SEMINARS:

- [1] Nanostructures for Electronics and Biomedical Applications: International Seminar, Bharathiar University, January 9, 2009.
- [2] NAAC Sponsored National Virtual Seminar on "Transforming Quality of Teaching by Adopting and Innovating ICT Tools & Techniques - A Key Focus Area of NEP 2020", organized by IQAC, Sri Ramakrishna College of Arts & Science, Coimbatore, held on 21st & 22nd April 2022.
- [3] National Webinar on "Research Report Writing and Publication in Indexed Journals" conducted on 04.05.2021 by the PG and Research Department of Zoology, A.D.M. College for Women (Autonomous), Nagapattinam.
- [4] Webinar on "Art of Writing Papers for Highly Indexed Journals" conducted on 14.05.2021 by the Department of Information Technology, Rathinam Technical Campus, Coimbatore – 21.
- [5] National Webinar on "International Day of Light – 2021" conducted on 16.05.2021 by St. Joseph's University, Dimapur, Nagaland – 797115.

PARTICIPATION IN WORKSHOPS:

- [1] National Workshop on Electrochemical Devices (Hands-on Training): Organized by the Department of Physics, PSGR Krishnammal College for Women, from August 22 to August 23, 2023.

- [2] e-workshop on “Spectroscopic Techniques: Basics and Applications” organized by the Advanced Materials & Devices Metrology Division, CSIR-National Physical Laboratory, New Delhi, during December 3rd–4th, 2020.

PARTICIPATION IN ORIENTATION PROGRAMME/ INDUCTION PROGRAMME/ SHORT TERM COURSES:

- [1] Malaviya Mission Teacher Training Programme, NEP 2020 Orientation & Sensitization Programme, Central University of Kerala.
- [2] Online course titled “An Introduction to Digital Ethics”, as certified by the Centre for Holistic Teaching and Learning at Hong Kong Baptist University and the United Board for Christian Higher Education in Asia in January 2026.
- [3] Malaviya Mission Teacher Training Programme, MMTTC, Mahatma Gandhi Antarrashtriya Hindi Vishwavidyalaya, Wardha, Maharashtra.

PARTICIPATION IN FACULTY DEVELOPMENT PROGRAMMES:

- [1] Recent Trends and Innovations in Materials Science – Five-day Online International FDP organized by the Department of Physics, KPR Institute of Engineering and Technology, from August 25 to August 29, 2025.
- [2] Environment-friendly Solid State Lighting – Program organized by the Department of Physics, Kongunadu Arts and Science College, on July 3, 2025.
- [3] Collaborative Faculty Enrichment Programme on “Teaching Methodologies” – Organized by the IQAC of Stella Matutina College of Education, Chennai, in collaboration with Nirmala College for Women, Coimbatore, from 22nd to 29th October 2025.
- [4] Online FDP on “Generative AI Tools for Smart Teaching” – Organized by the All India Association for Christian Higher Education (AIACHE), New Delhi, from June 9 to June 13, 2025.
- [5] Five Days International FDP (Online) on “Nanotechnology in Environmental Sustainability for Tomorrow (NEST’25)” – Organized by the Department of Chemistry,

Velammal College of Engineering and Technology (Autonomous), Madurai, from April 1 to April 5, 2025.

[6] Ten Days Virtual International FDP on “Frontiers in Material Science” – Organized by the Department of Physics, SRM Institute of Science and Technology, Ramapuram, Chennai, from March 17 to March 27, 2025.

[7] Online NEP 2020 Orientation & Sensitization Programme – Conducted by UGC–Malaviya Mission Teacher Training Centre (MMTTC), Mahatma Gandhi Antarrashtriya Hindi Vishwavidyalaya, Wardha, Maharashtra, from September 2 to September 10, 2025.

[8] NEP 2020 Orientation & Sensitization Programme – Conducted by Malaviya Mission Teacher Training Centre (MMTTC), Central University of Kerala, from November 4 to November 12, 2024.

[9] Internet of Things – Organized by the Department of Information Technology in collaboration with Didyu Technologies Pvt. Ltd., Coimbatore, on November 30, 2024.

[10] Learning Outcome Based Curriculum Framework in the Context of NEP – Faculty Enrichment Programme organized by the IQAC, Nirmala College for Women, on December 4, 2024.

[11] Sustainable Energy Spectrum: Exploring Trends and Applications in Renewable Resources – Online FDP organized by the Department of Mechanical Engineering, Army Institute of Technology, Pune, from May 14 to May 20, 2024.

[12] Training Programme/FDP on “Research Paper Writing” – Organized by Research Foundation India (RFI-CARE) in association with Nagindas Khandwala College, from July 1 to July 8, 2024.

[13] Online Workshop on “Advanced Artificial Intelligence Tools for Educators” – Organized by IGNITE Life Skill Academy & IQAC, Sacred Heart College (Autonomous), Thevara, Kochi, on October 28, 2023.

[14] Three Days National Online Workshop on “Research Project Proposal Writing & Report Writing” – Organized by HI LEARN EDUTECH Institute (HLE Institute), Bijapur/Vijayapur, Karnataka, on October 18–20, 2023.

- [15] Digital Age Pedagogy – Organized by the IQAC, Nirmala College for Women, on June 16, 2023.
- [16] Polymer Composites for Engineering Applications (PCEA-2023) – One-week Blended-mode FDP organized by the Department of Chemistry, B.M.S. College of Engineering, from May 22 to May 26, 2023.
- [17] Six Days Online FDP on “Next Generation Materials and Devices” – Organized by the Department of Physics, AMET Deemed to be University, Chennai, from December 13 to December 18, 2021.
- [18] Five Day International Online FDP on “Soft Skills for Capacity Building” – Organized by Joseph's Academy of Soft Skills, St. Joseph's College (Autonomous), Tiruchirappalli, from November 8 to November 12, 2021.
- [19] Six Days FDP on “Recent Developments in Materials Science – 21” – Jointly organized by the Departments of Physics and Chemistry, Sree Saraswathi Thyagaraja College (STC), Pollachi, Coimbatore, from June 16 to June 22, 2021.
- [20] e-Content Skill Development – One-week workshop organized by the Department of Mathematics, Nirmala College for Women, from June 14 to June 19, 2021.
- [21] Online Course on “Teamwork Skills: Communicating Effectively in Groups” – Offered by the University of Colorado Boulder through Coursera, completed on June 30, 2021.
- [22] One-week Online FDP on “Effective and Instructive Research” – Organized by the Department of Civil Engineering, Sona College of Technology, Salem, from May 4 to May 10, 2020.

CONFERENCE/ SEMINAR/ WORKSHOP ORGANIZED:

- [1] Modern Trends in Optics and Communication Techniques, 2019
- [2] Nanoscience and its importance, 2020
- [3] Research Methodology, 2022
- [4] Ion beams in material processing and research opportunities, 2023
- [5] Exploring research opportunities abroad - A guide for young aspirants, 2024
- [6] Research and innovation: A Student's Perspective, 2025

INVITED SPEAKER/ SESSION CHAIR- CONFERENCE/ SEMINAR/ WORKSHOP:

- [1] Evaluator for State Level Science Exhibition 2025–26 held on the 5th and 6th of December 2025, organized by the School Education Department of Tamil Nadu.

BOOK PUBLICATIONS:

- [1] In December 2021, published the book *Solid State Physics* (ISBN: 9789391373443) through Shanlax Publications.
- [2] In November 2024, published the book *Introduction to Energy Physics: Solar, Wind and Biomass* (ISBN: 9788198203052) through Nirmala College for Women under the guidance of Rev. Sr. Dr. Mary Fabiola.
- [3] In January 2025, authored and self-published the book *Principles of Physics* (ISBN: 978-93-5627-310-8).
- [4] In November 2025, published the book *Fundamentals of Electricity and Magnetism*, which features scientific illustrations related to electricity and magnetism (ISBN 978-81-907976-2-7).

MEMBERSHIP IN PROFESSIONAL BODIES:

- [1] Lifetime Professional Membership with the Institute for Engineering Research and Publications.
- [2] Lifetime Professional Membership with the International Association of Engineers.