

STAFF PROFILE

1) **Name** : **Dr.K.MAHALAKSHMI**

2) **Department** : Physics

3) **Designation** : Assistant Professor

4) **Address**

For correspondence: Providence college for women (Autonomous),
Coonoor, The Nilgiris.

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Palamalai road, Perriyanaickenpalayam(Po),
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Residence : -

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6) **E-mail** : **dr.k.mahalakshmi@gmail.com**

7) **Academic Qualifications:**

Qualification	Programme	University	Year
Ph.D.	SYNTHESIS AND CHARACTERIZATION OF NANO- AND MICRO-STRUCTURE THIN FILMS FOR DEVICE FABRICATION	Madurai Kamaraj University	13.09.2013
PG	Physics	Bharathiar University	2005
UG	Physics	Bharathiar University	2002

8) Career profile:

Current:

Organization	Designation	Duration
Providence college for women (Autonomous), Coonoor	Assistant Professor	2015 to till date

Previous:

Organization	Designation	Duration
SNS College of Technology, Coimbatore	Assistant Professor	2011-2013
Sri Ramanathan Engineering college, Vijayamangalam	Lecturer	2009- 2011

9) Participation in Orientation Programme / Refresher Course / Short term course / FDP

S.No	Participation	Organization	Date	Days
1	118 st Orientation Program	UGC-Academic Staff College, Bharathiar University	17.11.2017-14.12.2017	28 days
2	Refresher course	UGC-Academic Staff College, Bharathiar University	23.11.2018-13.12.2018	21 days
3	Refresher course	Ramanujan College, University of Delhi	17.05.2021-31.5.2021	15 days
4	Refresher course	UGC-Academic Staff College, Madurai Kamaraj University	7.10.2022-20.10.2022	14 days

10) Research Publications:

- Journal of Photochemistry and Photobiology A: Chemistry, February 2022, Volume 428, 113860 (**Impact factor: 4.291**), Achieving self-powdered photo response in monolayered SnO₂ nanostructure array UV photodetector through the tailoring of electrode configuration
Link: <https://doi.org/10.1016/j.jphotochem.2022.113860>
- Journal of Environmental Chemical Engineering, February 2022, Volume 10, 106981 (**Impact factor: 5.876**), Chemical growth and study of low intensity sensing ability of nanobranched and nanorod structured SnO₂ UV detector

Link : <https://doi.org/10.1016/j.jece.2021.106981>

- International - [Journal of Materials Science: Materials in Electronics](#)., 2nd November 2021 Volume 33, page: 260-269.(**Impact factor: 2.478**), The Study on Ni and Ti-co-doped BiFeO₃ nanorods: quenching of magnetism
Link : <https://doi.org/10.1007/s10854-021-07290-7>
- International - [Journal of Materials Science: Materials in Electronics](#)., 2nd January 2021 Volume 50, page: 1075 – 1082.(**Impact factor: 2.478**), Tailoring the size and magnetization of Titanium-Doped BiFeO₃ Nanorods
Link : <https://doi.org/10.1007/s11664-020-08632-7>
- International - [Journal of Materials Science: Materials in Electronics](#). (Scopus), October 2019, Volume 30, issue 20,page: 18306 – 18314.(**Impact factor: 2.17**), Ferromagnetic ordering in nickel doped BiFeO₃ nanostructured thin films.
- International Journal – Super lattices and Microstructures (Elsevier - Scopus), Vol.128 (2019) 181-198. (**Impact factor: 2.2**), Influence of twin boundaries on the photocurrent decay of nanobranch and dese-forest structured SnO₂ UV photodetectors
- International - [Journal of Materials Science: Materials in Electronics](#). (Scopus), Vol.28 (2017) 3217-3225. (**Impact factor: 2.019**), Novel report on single phase BiFeO₃nanorod layer synthesized rapidly by novel hot-wall spray pyrolysis system: evidence of high magnetization due to surface spins
- International Journal – Super lattices and Microstructures (Elsevier - Scopus), Vol.109 (2017) 145-153. (**Impact factor: 2.123**), Growth, mechanism and properties of TiO₂nanorodembedded nanopillar: Evidence of lattice orientation effect
- International - [Journal of Materials Science: Materials in Electronics](#). (Scopus), JULY 2016 ISSN 0957-4522, DOI 10.1007/s10854-016-5375-7, Role of hexamine: growth of multiarmed ZnO nanorods and evidence of merging due to lateral growth.
- International (Journal of Materials), JUNE 2016-Volume 2016, Article ID 3439827, pages,Synthesis and Study of CdS Thin Films Prepared with Different KMnO₄ Activation Time.
- International - [Journal of Materials Science: Materials in Electronics](#)., 2015 -Vol. 26, Page No. 3573-3582, Effect of nitrogen doped titanium dioxide (N-TiO₂) thin films by jet nebulizer spray technique suitable for photoconductive Study.
- International - Adv. Studies Theor. Phys., 2011-Vol. 5, Page No. 171-183, Studies on CdS Nanocrystalline Thin Films with Different S/Cd Ratios Prepared using Chemical Bath Deposition Method, Advanced Studies in Theoretical Physics.
- International - Contemporary Engineering Sciences, 2011-Vol. 4, Page No. 119-140, Structural, surface morphological and electrical properties of nanostructured p-type ZnO:N films, Contemporary Engineering Sciences.
- International - Contemporary Engineering Sciences, 2011-Vol. 4, Page No. 101-117, Structural, optical and Photoconductivity studies of ZnO:As nanocrystalline thin films, Contemporary Engineering Sciences.
- International - Contemporary Engineering Sciences, 2011-Vol.4, Page No. 85-100, Effect of substrate temperature on the Structural, surface morphological and optical properties of nanostructured ZnO:As films, Contemporary Engineering Sciences.

- International - Adv. Studies Theor. Phys., 2011-Vol.5, Page No. 155-170, XPS and Raman studies on (002) oriented nanocrystalline ZnO films showing temperature dependent optical red shift, Advanced Studies in Theoretical Physics.
- International-Adv. Studies Theor. Phys, 2011- Vol.5, Page No. 143-154, Columnar Growth of nanocrystalline ZnO thin films prepared through RF magnetron sputtering, Advanced Studies in Theoretical Physics

11) Conference / Seminar / Symposium / workshop organized

Year	Name of the Conference / Seminar / Symposium /workshop	Date From – To
2017	International Conference on Mathematics - Providence college for women, Coonoor.	4 th - 5 th August 2017
2019	Graph Theory and its Applications - Providence college for women, Coonoor.	22 nd August 2019
2020	Fluid Dynamics and its Applications - Providence college for women, Coonoor.	6 th Jan 2020

12) Participation in Conference / Seminar / Symposium

International Level :

- Department of mathematics, Providence College for Women (Autonomous), Coonoor, 23rd April 2022, Understanding hidden math behind innovative Technologies: A path way for Career Opportunity
- CSIR Integrated skill initiative, CSIR – Central Scientific instrument organization, 30th June 2021, Solar energy / Renewable energy smart technologies
- Department of Physics, Kongunadu Arts and Science college, Coimbatore, 5th June 2021, Energy Storage Systems

National Level

- UGC-DAE Consortium for Scientific Research, Indore, 29th and 30th May 2019 (Participated), Thematic Workshop on Physics at Low Temperature and High Magnetic field
- Providence College for Women, Coonoor, 20th and 21st March 2019 (Participated), National Level Workshop on Green Economy and Sustainability in India – Issues and Challenges
- Providence College for Women, Coonoor, 15th and 16th February 2018 (Participated), National Level Seminar Food safety, Social responsibility and Environmental Sustainability.
- Madurai Kamaraj University, Madurai, 5th – 6th October 2017 (Participated), National Seminar cum Workshop on Solar Thermal and Photovoltaic Techniques.
- UGC-DAE Consortium for Scientific Research, Indore, 3rd – 6th November 2016 (Participated), Study of Matter Using Intense Radiation Sources and Under Extreme Conditions.
- UGC-DAE Consortium for Scientific Research, 14th – 16th March 2012, Thin Film Magnetism.

State Level

- Department of Mathematics, Providence College for Women (Autonomous), Coonoor, 11th February 2022, Gender Sensitization and Mass Media.
- Department of Physics, Kongunadu Arts and Science college, Coimbatore, 15th November 2022, Hands on Python
- Department of Mathematics, Providence College for Women (Autonomous), Coonoor, 30th September 2022, R-Programming
- Department of Mathematics, Providence College for Women (Autonomous), Coonoor and Banari amman institute of Technology, Sathyamangalam. 16th April 2022, Media and Gender
- Research cell, Providence College for Women (Autonomous), Coonoor, 18th November 2021, Mindset based Walk – through for intellectual property

- Controller Section, Providence College for Women (Autonomous), Coonoor, 08th October 2021, OBE -Exploring new frontiers in education
- Department of Mathematics, Providence College for Women (Autonomous), Coonoor, 30th September 2021, R-Programming
- Department of Physics, Kongunadu Arts and Science college, Coimbatore, 10th June 2021 to 12th June 2021, Practical considerations and system aspects of Solar Photovaltaics
- Association of University Teachers, JAC off Pachaiyappa's Trust Board Colleges, 03th June 2021, CAS Application Submission Requirements
- Providence College for Women, Coonoor, 4th February 2016, Prerequisites of Research.
- PG and Research Department of Physics, The Madura College, Madurai., 29th December 2011, Nano and thin film Solar Material

13) Resource person / Invited Speaker/Session Chair – Conference/Seminar/Workshop:

- Bishop Heber College, Tiruchirappalli, 29th January 2018 (Resource Person), International conference on Material Science.
- Providence college for women, Coonoor, 4th - 5th August 2017, International Conference on Mathematics

14) **Member of Board of studies :** Chairman of Board of studies

15) **Membership in professional bodies :** Member of AUT

16) Institutional responsibilities:

Academic Year	Name of the Committee / Activities	Co-ordinator / Member
2015-2016	1. Eco Club	Member
	2. Discipline Committee	Member
	3. Extension Activities Yedappali Government School	
	4. Mentor	
	5. Guidance	
	6. Industrial Field trip	

2016-2017	1. Eco Club	Member
	2. Discipline Committee	Member
	3.Extension Activities Yedappali Government School	
	4.Mentor	
	5. Guidance	
	6. Industrial Field trip	
2017-2018	1. Eco Club	Member
	2. Discipline Committee	Member
	3.Extension Activities Yedappali Government School	
	4.Mentor	
	5. Guidance	
	6. Industrial Field trip	
2018-2019	1. Eco Club	Member
	2. Discipline Committee	Member
	3. College Development Committee	Member
	4.Extension Activities Yedappali Government School	
	5.Mentor	
	6. Guidance	
	7. Industrial Field trip	
2019-2020	1. Discipline Committee	
	2.Extension Activities Yedappali Government School	Member
	3.Mentor	
	4. Guidance	
2020 -2021	1. Discipline Committee	Member
	2.Mentor	
	3. Guidance	
2021 -2022	1. Student Council Election	Co-ordinator
	2. Library Committee	Member

	3. Eco Club	Member
	4.Extension Activities Yedappali Government School	
	5.Mentor	
	6. Guidance	
2022 -2023	1. Student Council Election	Co-ordinator
	2. Discipline Committee	Member
	3. Internal Assessment Committee	Member
	4. Placement Committee	Member
	5.Mentor	
	6.Extension Activities Yedappali Government School	

17) **Other Highlights:** Fifteen webinars attended