

Faculty Profile



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Designation : Assistant Professor
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Assistant Professor,
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Date of Joining in Collegiate Education : 27.07.2015
Date of Joining in the Present College : 14.09.2018
Academic Profile :

Degree	Institute/College	University	Period
B.Sc. Physics.	Govt Arts College, Coimbatore.	Bharathiar University, Coimbatore.	1992-1995
M.Sc. Physics.	Govt Arts College, Coimbatore.	Bharathiar University, Coimbatore.	1996-1998
M.Phil. Physics	Sri Ramakrishna Mission Vidyalaya, Coimbatore	Bharathiar University, Coimbatore.	1998-2000
Ph.D. Physics	Govt College of Technology,	Anna University, Chennai	2006-2012

Teaching Experience

- i) **Total** : 24 Years & 3Month
ii) **UG** : 24 Years & 3Month
iii) **PG** : 15 years

Name of the college	Position held	Period
CGAC, Tiruppur	Assistant Professor	5 years & 5 months
GAC – Udumalaipettai	Assistant Professor	2 years
GAC-Kulithalai	Assistant Professor	1 year
Kumaraguru College of Technology, Coimbatore	Associate Professor / Asst Professor	13 years
Anand Institute of Higher Technology, Chennai.	Lecturer	2 years
GAC, Chittur	Lecturer	6 months

Honors and Research Awards : NA

Field of Interest

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- i) **Teaching** : B.Sc., M.Sc. Physics, M.Phil. and Ph.D. students.
- ii) **Research** : **Thin films Nanotechnology used solar cell, Instrumentation design and optimization, Computational Nano science** (<https://orcid.org/0009-0001-4044-8403>)
- iii) **Proficiency in instrumentation** : Instrumentation research and developments were done for research works. Teaching instrumentation and practical for students.

Research Guidance**Guidance Number**

:

- (1). Bharathiar University : 30208-1/A2/2017,dt:31.01.2017
- (2). Anna University : Ref.No. 20.769.34; dt:09.01.2013

S. No	M.Phil/Ph.D	Name of the Student	Thesis Title	Completed/ongoing
1.	Ph.D.	Jeyachitra.R	Investigations on pure ZnO, Zn _{1-x} (Fe, Mg & Ni) _x O and Ag-(Fe, Mg & Ni) Co-Doped ZnO Nanocrystals for photocatalytic applications	Completed
2.	Ph.D.	Jagadhesan.S	Synthesis and characterizations OF ZnO, (Sb, Bi & Sn) doped ZnO Nanoparticles for Photocatalytic degradation applications	Completed

Funded Projects

:

Rs 25,000/- for the 'Fabrication of Dye Sensitized Solar Cell' by Kumaraguru College of Technology, Coimbatore.

Membership in Professional Bodies

:

S. No	Name of the Professional Body	Membership Detail with Number
1.	Indian Association of Physics Teachers (IAPT)	Life member
2.	Indian Society for Technical Education (ISTE) of India.	Life member

Research Publications

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- i) **Research Papers** :
Attached papers list - with doi and http link of the Paper (Annexure – I)
- ii) **Book/Book Chapters** :
❖ Engineering Physics, By Charulatha Publications, T Nagar, Chennai (Year: 2002).
❖ Engineering physics – I & Engineering physics – II by Inder publication, Velandipalayam, Coimbatore -641025. (Year: 2013-2014).
- iii) **Patent** : NA

National and International Conferences

: Attached separate list (Annexure – II)

- i) **Participated**

- ii) **Paper Presented**
- iii) **Poster Presented**

Conference/Seminars Organized : 7
Workshop attended : 8
Resource Person/Invited Lectures : 7
Faculty Development Programs Attended : 4

Course	University/Institute	Subject	Period
Orientation Programme	Bharathiar University	General orientation & Physics	16.12.2016 to 12.01.2017
Refresher programme	Bharathiar University	Physics	23.11.2018 to 13.12.2018
Refresher programme	Bharathiar University	Physics	08.09.2021 to 21.09.2021
Refresher programme	Ramanujan University, New Delhi	Physics	09.06.2023 to 23.06.2023

Academic Activities :

- i) **Subject Handled** :
Solid state Physics, Properties of matter and sound, Optics, Non-Linear Optics, Electromagnetic theory, Electronics, C-Programming, Python, Instrumentation, etc. Allied, UG, PG core practical.
- ii) **Class Advisor** : UG and PG students from 2015 to Till date.
- iii) **Special Coaching** :
Conducted a workshop for engineering students in flash animation. Bridge course for the students from school to college level learning. Motivational speech for students.
- iv) **Student Community Beneficial Activities** :
As an Panel member, Publishing a biannual E-Bulleting named as, “CHIKKANNA Science E-Bulletin for the benefit of knowledge update for the students community. Career counselling, Student projects using Adrino, Nanotechnology. Research activities, Startup ideas.
- v) **Co-curricular and extracurricular activities:**
Guiding students projects for their M.Sc., Nodal officer for the Electoral Literacy Club (ELC), Voter ID applying camps, Conducting Drawing, oster, Karaoke Song competitions for ELC as the guide lines of Collector, Corporation Commissioner of the District. During 2018-2019 at Government Arts College, Udumalaipettai. During 2020-2024 at Chikkanna Government Arts College, Tiruppur.

Professional Activities :

- i) **Reviewer** :
In research journals like Journal of Renewable & Sustainable Energy, etc.,
- ii) **Board of Studies/UR** :
Convenor for board of studies meetings at Kumaraguru College of Technology, Coimbatore (2014).
Board of Studies in autonomous institution.
- iii) **Examiner/Scrutiny** :
Examiner in UG, PG level in Bharathiar University and in other autonomous institutions.

iv) **Senate/Syndicate** : NA

National/ International Collaborations :
 Researchers (authors) from National and International for research ideas and related works.

Annexure-I

S.No.	Title of the paper	Name of the author	Title of the journal	Year of publication	Citation Index	Institutional affiliation as mentioned in the publication	DOI number
1.	Novel spray pyrolysis for dye-sensitized solar cell	Senthilnathan V & et al	Journal of Renewable and Sustainable Energy	2010	-----	AIP	https://doi.org/10.1063/1.3517228 (https://aip.scitation.org/doi/abs/10.1063/1.3517228 ?journalCode=rse)
2.	Review on importance of intermittent spray for SPTD and its automation	Senthilnathan V & et al	Optoelectronics and Advanced materials- Rapid communications	2010	-----	Natl Inst Optoelectronics, Romania	
3.	Novel automated SPTD for the fabrication of Dye Sensitised Solar Cell	Senthilnathan V & et al	Optoelectronics And Advanced Materials-Rapid Communications	2010	-----	Natl Inst Optoelectronics, Romania	
4.	Novel automated inclined rotating substrate for DSSC fabrication	Senthilnathan V & et al	Journal of optoelectronics and advanced materials	2010	-----	INOE 2000	
5.	Novel automation of intermittent spray pyrolysis using microcontroller	Senthilnathan V & et al	Journal of optoelectronics and advanced materials	2010	-----	INOE 2000	
6.	Novel inclined rotating substrate & automated intermittent spray pyrolysis for dye-sensitized solar cell	Senthilnathan V & et al	International Journal of the Instrument Society of India.	2011	-----	Instrumentation Society of India, IISC, Bangalore.	
7.	Prediction of film thickness using spray pyrolysis.	Senthilnathan V & et al	International Journal of Materials Science.	2009	-----	Int Journal of Materials Science.	
8.	Optical and photoluminescence studies of vacuum evaporated ZnS thin films,	Senthilnathan V & et al	International journal of Chalcogenide Letters, ISSN 1584-8663.	2014	-----	Academy of Romanian Scientists.	
9.	Optical, Photoluminescence and Electrical properties of Vacuum evaporated ZnS	Senthilnathan V & et al	International Journal of ChemTech Research	2014	-----	CODEN (USA): IJCRGG ISSN : 0974-	

	thin films					4290	
10.	Effect of Ni doping on structural, optical and photocatalytic properties of Zn1-XNiXO nanoparticles prepared by different pH conditions	Senthilnathan V & et al	Journal of Advances in Chemistry	2016	-----	The Council for Innovative Research (CIR)	
11.	Preparation of (Ag, Mg) co-doped ZnO nanocomposites and their enhanced photocatalytic activity	Senthilnathan V & et al	Journal of Advances in Chemistry – (ISSN 2321-807X)	2017	-----	www.cirworld.com, (ISSN 2321-807X)	
12.	Studies on electrical behavior of Fe doped ZnO nanoparticles prepared via coprecipitation approach for photo-catalytic application	Senthilnathan V & et al	Journal of Materials Science: Materials in Electronics (ISSN 0957-4522 Mater Sci: Mater Electron	2017	-----	Springer	DOI 10.1007/s10854-017-8021-0) (https://iopscience.iop.org/article/10.1088/2053-1591/aaaf80)
13.	Sb doped ZnO nanostructures prepared via co-precipitation approach for the enhancement of MB dye degradation	S Jagadhesan, N Senthil Kumar, V Senthilnathan and T S Senthil	Materials Research Express	2018	-----	IOP publishing	https://doi.org/10.1088/2053-1591/aaaf80 Mater. Res. Express 5 (2018) 025040
14.	Studies on diamond like Sn doped ZnO nanostructures prepared via co-precipitation approach for improving photo-catalytic application	Senthilnathan V & et al	Journal of optoelectronics and advanced materials	2018	-----	INOE Publishing House Integra Natura Omnia et Aeterna	
15.	Nanoflakes like Bi doped ZnO nanostructures prepared via Co-precipitation approach for the enhancement of dye degradation	Senthilnathan V & et al	Optoelectronics and advanced materials-Rapid communications.	2018	-----	INOE Publishing House Integra Natura Omnia et Aeterna	
16.	A review on various doped TiO ₂ using metallic and non-metallic nanocrystals.	R.Deepha, V.Senthilnathan, Haresh M Pandya.	International Journal of Science & Engineering Development Research (www.ijedr.org)	November-2022	ISSN: 2455-2631	International Journal of Scientific Development and Research, Open Access Journal ISSN Approved	http://www.ijedr.org/papers/IJEDR2211053.pdf

						Journal No: 2455-2631, ESTD Year: 2016.	
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Annexure-II

RESEARCH PAPER PRESENTATIONS IN SEMINAR / CONFERENCE AT NATIONAL /INTERNATIONAL LEVEL

1. **Analysis of high band gap materials for solar cells – I** in national level seminar on recent trends in material science held at Alagappa University on 3rd May 1999.
2. **Analysis of high band gap materials for solar cells-II** in national level seminar on recent trends in material science held at Sri Venkateshwara University, Tirupathi during 25th to 27th November 1999.
3. **Review of Plastic Solar cells-Design and Development** in the National Conference on Recent Trends in Polymer Science and Technology organized by Department of Chemistry, PSG college of Technology, Coimbatore on 14th and 15th July 2006.
4. **Novel strategies for incorporation of polymer photovoltaics into garments and textiles** in the International conference on Technical textiles organised by Department of Textile technology, IIT Delhi, on 11th and 12th November, 2006.
5. **Novel methods of quantum dots for increased solar cell conversion – An overview** in the international conference on ionic devices – 2006, organised by Anna University, Chennai, during 7th to 9th December, 2006.
6. **Novel strategies for incorporation of polymer – Nano particle photovoltaics into garments and textiles** at fourth Indo-US collaborative International conference on Advances in Textiles, Machinery Non woven and Technical Textiles – ATNT 2007, Organised by Kumaraguru College of Technology, Coimbatore, India and Texas Tech University, Lubbock, USA at Kumaraguru College of Technology, Coimbatore, from 18th to 20th June 2007.
7. **Preparation & Characterization of Polyaniline from aniline for solar cell application - Electrochemical method** at the International Conference on Solar cells ‘IC – SOLACE – 2008’. Organized & conducted by Cochin University of Science & Technology, Cochin, during 21st to 23rd January 2008.
8. Prediction of TiO₂ film thickness deposited using spray pyrolysis for DSSC at the International Conference on advanced materials & applications-(ICMA-2011), supported by DST,CSIR,BRNS,DRDO on 4th and 5th March 2011(at www.kalasalingam.ac.in).

9. A research paper entitled "A Review on doped TiO₂ using Spray Pyrolysis Method" was presented in the International Conference on Energy Power Integrated Circuits and Systems (EPICS - 2021) organized by the Department of Electrical and Electronics Engineering, Bannari Amman Institute of Technology during 22 -23 December 2021.
10. A research paper titled "A Review on Various doped TiO₂ using metallic and non-metallic Nanocrystals" was presented in the International Conference on Energy Power Integrated Circuits and Systems (EPICS - 2021) organized by the Department of Electrical and Electronics Engineering, Bannari Amman Institute of Technology during 22 -23 December 2021.

SEMINAR / CONFERENCE / SYMPOSIUM AT NATIONAL/ INTERNATIONAL LEVEL & SHORT-TERM COURSES ATTENDED (ACADEMIC) / ORGANISED.

1. Seminar on **Concepts of Mass and Gravity** organized by and conducted at Sri Ramakrishna Mission Vidyalaya College of Arts & Science in association with Brain trust world community service centre, Chennai, 24th July 1999.
2. National conference on **Recent advances in molecular interactions (NCRAMI -2004)** organized and conducted at PSG college of Arts & science, Coimbatore, 26th and 27th March 2004.
3. Regional level seminar on **Crystal growth, characterization & application** sponsored by UGC and organized and conducted at PSG college of Arts & science, Coimbatore, on 30th and 31st December 2005.
4. 7th National Conference on **Solid State Ionics** organized by Department of Physics, Bharathiar University, Coimbatore and Department of Physics, Karunya Institute of Science & Technology (Deemed University), Coimbatore at Bharathiar University, Coimbatore and Karunya Institute of Science & Technology (Deemed University), Coimbatore during 6th to 8th June 2006.
5. National conference on **Crystal Growth for Electro-Optic Applications (CGEOA-2006)**, sponsored by Karunya Institute of Technology, Dept of Information Technology (MOCT), Govt. of India, Indian Association of Crystal Growth & Indian Science Congress Association, organized by and conducted at the Crystal Growth Research Center (CGRC), Department of Physics, Karunya Institute of Science & Technology (Deemed University), Coimbatore, on 16th and 17th June 2006.
6. Workshop on **Digital Signal Processing** sponsored by AICTE, organized by and conducted at Department of Electronics and Communication Engineering, Kumaraguru College of Technology, Coimbatore, during 19th to 22nd June 2006.
7. Conference on **Recent Trends in Solar Photovoltaics** (Sponsored by INSA) organized by the Department of Physics, Coimbatore Institute of Technology, Coimbatore, on 13th July 2006.

8. Seminar **Renewable Energy Today and Tomorrow**, organized by Department Mechanical Engineering, Kumaraguru College of Technology, and Coimbatore. Sponsored by Tamilnadu energy Development agency and Ministry of Non Conventional energy, on 19th July 2006
9. National Seminar on **Characterization of Thin and Bulk Materials-NASCOM-2006** organized and conducted at PSGR Krishnammal College for Woman, Peelamedu, Coimbatore, on 20th September 2006.
10. Workshop on **Theoretical and practical approach on Matlab**, organized and conducted by the Department of Electronics and Communication Engineering, Kumaraguru College of Technology, Coimbatore, on 25th and 26th September 2006.
11. One day workshop Acquaintance programme on **Accelerator based research** held at Kongunadu
12. Arts & Science College, Coimbatore, Tamilnadu, organized by The Inter University AcceleratorCentre (IUAC, An autonomous Inter University Centre of UGC, New Delhi) and Department of Physics, Kongunadu Arts & Science College, Coimbatore, Tamilnadu, on 1st December 2006.
13. One day National level seminar on **Nano Science & Technology for New Materials & Future Challenges Ahead**, organized & conducted by Department of Physics, PSG Krishnammal College of Arts & Science, Coimbatore.
14. Involved in Organising the National Conference on Recent Trends in Applied Mathematics (NCRTAM) at Kumaraguru College of Technology, Coimbatore, on 25th and 26th April 2003.
15. Involved as Coordinator for Physics in Organizing the National conference on Developmental Scenario in Applied Physical Sciences Communicative English – “CONFLUENCE –2007” on 2nd and 3rd March 2007 organised by the department of science and humanities Kumaraguru College of Technology, Coimbatore.
16. Involved as Coordinator for Physics in Organizing the National conference on Developmental Scenario in Applied Physical Sciences Communicative English – “CONFLUENCE –2012” on 2nd and 3rd March 2012 organised by the department of science and humanities Kumaraguru College of Technology, Coimbatore.
17. Chaired a session in the TNSCST sponsored **National seminar on Current Innovations & Future Perspectives in Nanoscience and Technology** (NSNST-2019) ON 1ST February 2019, at Chikkanna Government Arts College, Tiruppur.
18. Organising Committee member - TANSCHS Sponsored National Conference-NCPST-2020 -5th March 2020.
19. Organising Committee member - "International Webinar Lecture Series on Laser, Optics & Photonics" 11-13 June 2020.
20. Organizing Committee Member-Online webinar on " VETTRI UNAKKULLA"-03.07.2020.

21. Online webinar on " Yoga Therapy-How it can help you"-10.08.2020.
22. National Science Day Celebrations-26/02/2021.
23. TANCHE sponsored National Conference on Modern Innovations and perspectives on Emerging Interfaces in Physical Sciences and Technology (NCPST-2020) on 5th March 2020.
24. Served as Presiding Officer in Tamil Nadu legislative assembly election 2021.

WORKSHOPS PROGRAMMES ATTENDED:

1. Seminar on **Emerging Trends in Industry Institute Interaction** organized by Industrial Institute partnership cell, Kumaraguru College of Technology, Coimbatore on 10th July 2004.
2. Awareness programme on **Quality System Management (ISO 9001:2000)** organized by MR office, Kumaraguru College of Technology, Coimbatore on 21st August 2004.
3. Workshop on **Management Skills** under faculty development programme arranged by Career Development Academy, Kumaraguru College of Technology, Coimbatore on 21st to 24th April 2004.
4. Short term training programme / QIP workshop on **Advanced polymeric materials for electronic and electrochemical applications**, sponsored by AICTE, organized by Department of Chemical Engineering, Indian Institute of Technology, Madras, Chennai, from 2nd to 7th, July 2007.
5. Workshop on Nano materials characterization and their process applications, organized and conducted by Department of chemical engineering, NIT, Tiruchirapalli, sponsored under TEQIP community services, on February 28, 2008.
6. A one day technical workshop on Latest trends in Test & Measurement Technology organized by the Dept of Electrical and Electronics, Coimbatore Institute of Technology (CIT), Coimbatore and conducted by Ms.Tektronix, USA on March 21, 2013 at CIT, Coimbatore.
7. Faculty Development program 'Naan Mudhalvan – Sales Force Associate', organized by Government of Tamil Nadu conducted at Bharathiar University, Coimbatore from 30.01.2023 to 03.02.2023 (5 days).
8. One Day Training Cum Orientation Programme Organized by Department of English and Foreign Languages, and Department of Linguistics, Bharathiar University, Coimbatore in association with TANSICHE, on 30th September, 2020.

RESOURCE PERSON / INVITED LECTURES:

1. A guest lecture titled 'wonderful physics' on 14/9/2022 at the Angel College of engineering Tiruppur.

2. Chief Guest for the State Level Seminar and delivered a talk on “இனிக்கும் இயற்பியல் / Sweet Physics" at Loyola College of Arts and Science, Mettala, Oilpatti - Po., Rasipuram Tk., Namakkal on 10.12.2021.
3. A guest lecture titled 'wonderful physics' on 10.9.2018 at Maharani arts college, Dharapuram.
4. A guest lecture titled 'Flash animation creation' at Kumaraguru College of Technology, organised by the Entrepreneurial cell in 2010.
5. A guest lecture titled 'Humour for Health' on 14/9/2022 at the Angel College of engineering Tiruppur.
6. A guest lecture titled 'ஏழாவது சுவை: நகைச்சுவை' (Sense of Humour) on 25.07.2012 at the Angel College of engineering Tiruppur during the inauguration of Tamil mandram and the Humour club.
7. A guest lecture titled 'Good sense of humour for better student management' was conducted in Swami Vivekananda Hall on Wednesday 27.03.2013 for the Faculty of KCT in Kumaraguru College of Technology.
