

CURRICULUM VITAE



Name : **Dr. S. RENUKA**
Designation : ASSISTANT PROFESSOR
Department Name : PHYSICS
Date of Birth : 15.01.1985
Date of Appointment : 29.07.2015
Sex : FEMALE
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Contact Details

Present Address: Department of Physics
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Qualification : M.Sc., M.Phil., Ph.D.,

Specializations : Ultrasonics and Nanotechnology

Experience: Teaching : 9 Years Research : 9 years

Research Guidance:

Programme	Awarded	Guidance
M.Sc.	18	2
M.Phil.	2	1
Ph.D.	-	-

Publications : National and International

1. **S Renuka**, V Hariharan, JV Arulraj, P Sutharsan, B Gokulakumar, K Dhanaraj.,2023, Evaluation of antibacterial activity using Aerva lanata and Millettia pinnata leaf extracts mediated ZnO and Cu-doped ZnO nanoparticles, Global NEST Journal, Vol 25, No 6, pp 48-54.
2. V. Hariharan , **S. Renuka**, P. Sutharsan., 2023, Unburned Carbon from Bagasse

- Fly Ash to Produce Activated Carbon in a Single-Stage Chemical Process, International Journal of Current Science Research and Review 6 (01), 121-124
3. **S. Renuka**, K. Dhanaraj, S.H. Socrates and B.Gokulakumar., (2017) Synthesis and Characterization of Surfactant (PVP) Capped Zinc Oxide Nanorods., Elixir Appl. Chem., 103 , 45678-45681.
 4. R. Ezhil Pavai and **S.Renuka**, 2011, Study of molecular interaction in ternary mixture of propyl acetate in cyclohexane with 2-methoxyethanol at 303, 308 & 313K, *International Journal of Research in Physical Chemistry*, 1(1): 32-37.
 5. R. Ezhil Pavai and **S.Renuka**, 2011, Thermodynamic properties of L-threonine in aqueous solutions of KNO₃ at 303 K, *International Journal of Research in Pure and Applied Physics*, 1(2): 6-10.
 6. R. Ezhil Pavai and **S. Renuka**, 2010, Theoretical evaluation of ultrasonic velocity in ternary mixtures using various approaches, *Annamalai University Science Journal*, 46: 135-138.
 7. R. Ezhil Pavai, **S. Renuka**, L. Balu and P. Vasantharani, 2010, Study of Molecular Interactions among Esters, Toluene and Aniline using Ultrasonic Technique, *Journal of Experimental Sciences*, 1(6): 21-24.

Conference/ Seminar Presented/ Attended :

National and International

1. Seminar on “Creative Teaching Techniques” Faculty development Programme organized by Internal Quality Assurance Cell on 22.08.2015, Govt. College for Women (Auto), Kumbakonam-612 001.
2. **S. Renuka**, R. Ezhil Pavai and L.Balu, density, viscosity and velocity study of ternary liquid mixtures at three different temperatures 303, 308 and 313 K. **National conference in advanced materials and its applications (NCAMA-2014), 4th and 5th April, 2014, Department of Physics, FEAT, Annamalai University. (Best paper award)**
3. R. Ezhil Pavai, **S. Renuka** and S. Sujeetha, Ultrasonic studies of L-Cysteine in binary aqueous solution of sodium nitrate at 303K. **National Seminar on Advances in Physics-(NSAP-2011), 10th & 11th March, 2011, Department of Physics, Manonmaniyam Sundharanar University, Thirunelveli.**
4. R. Ezhil Pavai and **S. Renuka**, Ultrasonic study of intermolecular interaction through hydrogen bonding in 2-Ethoxyethanol+ cyclohexane + Propyl acetate at 303.15, 308.15 & 313.15K. **International Conference on Waves and Material Science – (ICWAMS), 23rd August, 2010, Department of Physics, St. Joseph College of Arts and Science, Cuddalore.**
5. R. Ezhil Pavai and **S. Renuka**, Study of molecular interaction in ternary mixtures of 2-Butoxyethanol+ Cyclohexane + Propyl acetate at 303.15, 308.15 & 313.15K. **International Conference on Recent Frontiers in Applied Spectroscopy – (ICORFAS-2010), 22 – 24 September, 2010, Department of Physics, Annamalai University.**
6. R. Ezhil Pavai, **S. Renuka** and L.Balu, Thermodynamic and acoustic properties of some ternary liquid mixtures of alcohols. **National Seminar on Chemistry of Nanomaterials and Molecular Dynamics (CNMD-2010), 30th-31st December, 2010, Department of Chemistry, Annamalai University.**

7. R. Ezhil Pavai and **S. Renuka**, Study of molecular interaction in ternary liquid systems at 303,308 and 313K. **National Seminar on New Frontiers in Chemistry – (NSNF) 15th & 16th March, 2010, Department of Chemistry, Annamalai University.**
8. R. Ezhil Pavai, **S. Renuka**, P. Vasantharani and L. Balu, Ultrasonic study of molecular interactions in ternary mixtures of esters + toluene + aniline. **Recent trends in Bioscience (Bios – 2009) – 21st Millinaium, 6th & 7th March, Department of Zoology, Annamalai University.**
9. R. Ezhil Pavai, **S. Renuka**, P. Vasantharani and L. Balu, Molecular interaction studies on esters containing organic liquid mixture using ultrasonic technique, **National conference on emerging trends in chemical research (NCETCR - 2008), 17th & 18th October, Department of Chemistry. Annamalai University.**
10. National Conference in advanced materials and its applications (NCAMA-2014) (**BEST PAPER AWARD**) 2014th and 5th April 2014, Engineering Physics, Faculty of Engineering and Technology, Annamalai Nagar, Annamalai University.
11. National Conference on Frontier areas in applied Physics (NCFAAP – 2016) 27th April, Engineering Physics, Faculty of Engineering and Technology, Annamalai Nagar, Annamalai University.
12. Mini winter school on PYTHON (PYTHON – 2017) Feb 14 – 16, PG & Research Department of Physics, GCWK.
13. Symposium on trend setters in materials science (TSIM – 2018) Feb 6th & 7th, PG & Research Department of Physics, GCWK.
14. Mini winter school on Mathematical Physics and Statistical Mechanics (MPSM – 18), 3rd to 5th October, PG & Research Department of Physics, GCWK.
15. Materials modelling using Quantum Espresso- Theory and Practice for Beginners (QE19), 29th & 30th July, PG & Research Department of Physics, GCWK.
16. Recent Trends in Advance materials RTAM@RSGC, 12th March 2020, Post Graduate and Research Department of Physics, Raja Serfoji Government College (A), Thanjavur.
17. International level webinar on carbon based nano composites and their applications with special reference to bio medicals application, 30th July, Hindustan college of engineering and technology Coimbatore.
18. “Higher Education Opportunities for Graduate Students of Arts & Science”, 13th July 2020. G. T. N. Arts College (Autonomous), Dindigul.
19. International Webinar Series on “MICROMAGNETICS OF FERROMAGNETIC NANOSTRUCTURES” organized by the Department of Physics, Seshasayee Institute of Technology (Government Aided Autonomous Institution) Ariyamangalam, Trichy-10, TamilNadu. during 18/8/2020.
20. Five days Virtual workshop on “Analytical Instrumentation” from 05th to 09th July 2020 Organized by the Department of Chemistry, B.S. Abdur Rahman Crescent Institute of Science and Technology, Chennai-600 048, Tamil Nadu, India.
21. National Webinar on “Research Methodology” held on 17th July, organized by Loyola Collge, Chennai 600038, Tamilnadu India,
22. Webinar on “Nanoscale Non linear Optics – An Exciting Glimpse organized by Vellore Intitute of Technology (VIT) Chennai on 7th July 2020.

23. Webinar on “ Advancement in Physical Chemistry” Organized by Department of Chemistry, Mehendra Institute of Technology, Namakkal held on 17.07.2020.
24. Webinar on “Medicinal Plants and Advances in Natural Products for drug discovery” Organized by Department of Chemistry, Mehendra Institute of Technology, Namakkal held on 27.07.2020.
25. Virtual Workshop On “Scientific Documentation Through Latex” organized by PG & Research Department of Physics, Government College for Women (Autonomous), Kumbakonam - 612 001, on 28/2/2021
26. Webinar on “Infrared Spectroscopy of Transient chemical species in Helium Nanodroplets” organized by Department of Physics, Sacred Heart College(A), Tiruppattur on 17.07.2020.
27. National Webinar on “Fundamental Concepts of Thermodynamics in Physics” Department of Physics, Sri Vani Degree & PGCollege, Anathpuram, Andhra Pradesh on 20.07.2020.
28. International webinar on nanostructured metal oxide thin films for sensor technology organized by department of physics saveetha engineering college on 16.07.2020.
29. International symposium on medical and radiation physics organized by department of physics women’s christian college chennai on 25-07-2020
30. National level E-Quiz in ‘Basic physics’organized by Department of Physics, Sarasawathi Narayanan College, Madurai on 16-07-2020
31. The ‘Online Lecture on Electrostatics-I’ jointly organized by the Indian Association of Physics Teachers Regional council (Dehli & Haryana) and Dehli state science teachers 18th July 2020.
32. The ‘Online Lecture on Optics-II “Polarization”’ jointly organized by the Indian Association of Physics Teachers Regional council (Dehli & Haryana) and Dehli state science teachers 18th July 2020.
33. Webinar on “Characterization Techniques for Nanomaterials” organized by The National Institute of Engineering, Mananthavady Road, Mysuru-570008, Karnataka, on June 26, 2020.
34. Three days National Webinar on Chemistry in Circular Economy & Sustainability(CHEMinar-20) organized by 29.07.2020-31.07.2020.
35. International Webinar on “Materials for Current Trends and Future Challenges”held from 14.07.2020 to 15.07.2020 organized by GOVERNMENT ARTS COLLEGE FOR WOMEN, Salem-8, Tamil Nadu, India.
36. International Webinar on “Electrospinning of Nanobiomaterials and role of a chemist in development of Nanobiomaterials” on 08.07.2020 organized by VO chidambaram college, Thoothukudi.
37. Webinar on “Opportunities in Indo-German Bilateral Funding Programmes”organized by Department of Physics - School of Sciences, National Institute of Technology Andhra Pradesh, on 22nd July, 2020.

**Workshop
Attended**

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National and International

1. Prof. K.S. Sonachalam memorial XX Inter – Disciplinary Research Methodology Workshop 27th February – 2nd March 2010.
2. Seminar on computational materials science, Department of Physics, Pondicherry University on 26th March 2011.

3. Faculty Development Programme, Internal Quality Assurance Cell, Government college for women, 22nd Aug 2015.
4. Symposium on Trends Setters in Materials Science (TSIM – 18), 6th & 7th Feb 2018, P.G. and Research Department of Physics, Government College for Women (Autonomous), Kumbakonam.
5. Workshop on Troubleshooting of Physics Laboratory Equipments and Repair, 28th Feb - 2018, P.G. and Research Department of Physics, Government College for Women (Autonomous), Kumbakonam.
6. Workshop on Analytical Instrumentation, 5th to 9th July, B.S AbdurRahman Crescent Institute of science and Technology.

FDP Attended

1. Faculty Development Programme On “Virtual Classroom Made Easy“ organized by IQAC & Dept. of Computer Science, Government College for Women (Autonomous), Kumbakonam on 09.08.2020.
2. Online Faculty Development Programme on Spectroscopic Techniques organized by PG and Research Department of Physics, Jamal Mohamed College (Autonomous), Tiruchirapalli-620020, during the period 03.08.2020 to 05.08.2020.

Details of Orientation and Refresher course completed (year-wise)

Year	Title of the programme (Orientation and Refresher course completed)	Name of the Institute organized
03.03.2017 to 30.03.2017	95 th Orientation Programme	Bharathidasan University, Khajamalai Campus, Tiruchirapalli.
11.10.2019 to 24.10.2019	Refresher Course in Physics (Batch XXII)	University of Madras
11.10.2019 to 24.10.2019	Refresher Course in Physics (Batch XXII)	University of Madras

Seminar/Conference/Workshop/Symposia/Training programme organized

Year	Name of the Seminar/Conference/Workshop/Symposia/Training programme organized
2018	UGC Sponsored Workshop on TROUBLESHOOTING OF PHYSICS LABORATORY EQUIPMENTS & REPAIR.
2020	“E-Quiz on The Frontiers of Nano Science and Nanomaterials” 27-29 th June 2020.
2021	1. Webinar on Virtual Physics Laboratory” 29 th Jan 2021. 2. Virtual Workshop on “Scientific Documentation Through LaTeX” 27 th Feb 2021.

M.Phil./ M.Sc., Dissertation/Project particulars:

Year	degree	Name of the student with Reg.No/roll no	Title of the dissertation
M.Sc Project			
2016	M.Sc	A.MONISHA P14PH017	Influence Of Polyethylglycol On Hydroxyapatite Nanoparticles
	M.Sc	R.SURIYA P14PH030	Microwave Irradiation Synthesis Of Hydroxyapatite From Green Mussel
	M.Sc	VIMALA P14PH033	Microwave Irradiation Synthesis Of Hydroxyapatite From Anadara Granosa
	M.Sc	RANJANI DEVI P14PH027	Synthesis and characterization of nano biomaterial from natural source
	M.Sc	SIVA SAKTHI P14PH029	Synthesis Of Surfactant Assisted Hydroxyapatite From Sea Shell Waste
2017	M.Sc	R. MEERA P15PH011	Nanocrystalline hydroxyapatite extracted from sea shell by capping of Poly vinyl alcohol (PVA)
	M.Sc	A.MADHUMIDHA P15PH009	Single step sintered hydroxyapatite form cockle shell
	M.Sc	M.FAHUMITHA BEGAM P15PH005	Synthesis and capping Agent Assisted of nanosized Hydroxyapatite
2018	M.Sc	S. KEERTHANA P16PH010	Nano Synthesis Of Tricalcium Phosphate From Egg Shell
	M.Sc	K. PADMAPRIYA P16PH013	Polymer (Poly Vinyl Pyrolidone) Assisted Nanohydroxyapatite From Waste Egg Shell
	M.Sc	K. SARANYA P16PH019	Influence Of Poly Ethylene Glycol(PEG) On Tricalcium Phosphate Nanoparticles
	M.Sc	B.TAMILSELVI P16PH025	Influence Of Polyvinyl Alcohol (PVA) In Tricalcium Phosphate Nanoparticles
2019	M.Sc	K.ANANTHI P17PH001	Synthesis of waste egg shell into valued nanoTricalcium phosphate for biomedical applications
	M.Sc	K. KANMANI P17PH010	Single step calcined Tricalcium phosphate from egg shell waste
	M.Sc	S.RAJESWARI P17PH017	Synthesis and characterization of zinc doped nanotricalcium phosphate (TCP) from waste egg shells
2020	M.Sc	N.ANITHA P18PH004	Green Synthesis Of ZnO Nanoparticles Using Cynodo Dactylon Leaves Extract
	M.Sc	H. JANANI P18PH011	Biological Synthesis Of Zinc Oxide Nanoparticles From Terminalia Arjuna Leaves

2021	M.Sc	B.MATHIVATHANI P18PH015	synthesis, characterization of ZnO nanoparticles prepared by biological method using aerva lanata
	M.Sc	A.PONNI P18PH017	Recent Advances And Emerging Opportunities In Pongamia Pinnata Green Synthesis Of ZnO Nanoparticles
	M.Sc	M.CHITHIRAISELVI P19PH003	Green synthesis of Fe-doped ZnO Nanoparticles using Cynodon dactylon leaves extract
2022	M.Sc	N.DEEPAPRIYA P19PH004	Synthesis and Characterization of Fe-Doped ZnO Nanoparticles
	M.Sc	G.GEETHANSALLI P20PH006	Synthesis and Characterization of Fe-Doped Zinc Oxide (ZnO) using Nanoparticles Canna Indica Leaf Extract
2023	M.Sc	P.SARANYA P20PH018	Synthesis ZnO Nanoparticles using leaf extract of cymbopogon citrates and Evaluation of its antibacterial activity
	M.Sc	M.AARTHI P21PH001	Biological Synthesis Of Zinc Oxide Nanoparticles From Terminalia Arjuna Leaves Extract And Photocatalytic Activities
	M.Sc	AKSHAYA.N P21PH002	Green synthesis and characterization of ZnO nanoparticles using the extract of cymbopogon citrates
	M.Sc	PAPATHI. P P21PH014	Synthesis And Characterization Of Zno Nanoparticles Using Aerva Lanata Leaf Extract

M.Phil., Dissertation

2021	M.Phil	P.ANUSUYA MP19PH003	Green Synthesis And Characterization Of Cu Doped Zinc Oxide (ZnO) Nanoparticles Using Biotemplate
2022	M.Phil	K.HEMANANDHINI Reg.No.MF20PH002	Green Synthesis And Characterization Of Fe-Doped Zinc Oxide (ZnO) Nanoparticles Using Canna Indica Leaf Extract