



STAFF PROFILE

Name : **Dr. D. SIVARANJANI**

Designation : Assistant professor

Date of Entry into service : 07.11.2025

Educational Qualification : M.Sc, Ph.D, SET, B.Ed.,

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QUALIFICATION:

Degree	Subject	Institution	Year	Grade
Ph.D	Physics	Pachaiyappa's College Chennai- University of Madras	June 2022	Highly commen ded
SET	Physics	Mother Teresa Women's University	2018	Qualified
PG	Physics	PG & Research Department of Physics The Madura College(Autonomous), Madurai	2016	First Class
B.Ed	Physics	NPR College for Education Natham, Madurai Kamaraj University	2008	First Class
UG	Physics	Idhaya College for Women, - Alagappa University	2007	First Class

RESEARCH EXPERIENCE:

PG Project(2015-2016)

Title: "Preparation and Characterization studies of ZnO Thin film by using chemical Bath Deposition Method"

PhD (2017-2021)

Title: "Studies on the Properties of Confined Excitons in Low Dimensional Semiconductor Structures"

TEACHING EXPERIENCE: 7 years

- I worked as an Assistant Professor in the Department of Physics at Sourashtra College Madurai from 18.6.2018 to 31.07.2021
- I worked as an Assistant Professor on leave vacancy for two month (October and November -2021) at Fatima College Madurai
- I worked as an Assistant Professor in the Department of Electronics at Mannar Thirumalai Naicker College . (04.06.2023 to 19.1.2023)
- I worked as an Guest Lecture of Physics at Mannar Durai Singam Government Arts & Science College, Sivaganga.(21.01.2023 to 05.11.2025)

RESEARCH PUBLICATIONS

- **C.P.Balaji, V.Grija ,D.Sivaranjani ,D.Aravind ,K.Sivasami ,k.Anbazhagan** "Reducing the frictional Resistance In Ship's hull using air bubble lubrication techniques "Journal of Ion Exchange And Adsorption(Scopus Index).ISSN:1001-5493:Vol. 23,Issue-01(2023) 235-240
 - V.Girija ,C.P.Balaji ,D.Aravind, **D.Sivaranjani** "Ceramics in marine diesel engines"NIU International Journal of Human Rights .ISSN:2394-0298:Vol.10(III)(2023)67-7
 - **D.Sivaranjani** and P.Elangovan "Effect of confinement on inter band optical transition energies of exciton in a quantum dot " **Journal** of Interdisciplinary cyclere search ISSN No.0022-1945; Vol.XII, Issue XI, (2020) 527-536.
- **D.Sivaranjani** and P.Elangovan "Effect of confinement on the excitation binding energy and optical gain in a strained quantum dot" science technology and Development ISSN No.0950-0707; Vol.IX, Issue XI, (2020) 269-276.

- **D.Sivaranjani** and P.Elangovan “Influence of dielectric confinement on the interband emission energy of excitation in a quantum well” *Advance in physical science and materials (ICAPSM 2020)* IOP series journal of physics CS, V02.1 ISSN no, 1742-6596:726-733.

National, International Conferences oral Presentation

- Presented paper entitled “Synthesis and characterization of nano crystalline Po_4/C Cathode materials” at the National conference on Nano-materials and Nano biotechnology (CNC-NCNN'17) Organized by National Centre For Nanoscience and Nanotechnology University of Madras, Chennai on February 7th-8th 2017.

- Presented paper entitled “ Effect of confinement on interband optical transition energies of excitation in a quantum dot” at the National conference of nano materials, NLO Materials and Nonlinear Dynamics (NCNN-2018) Organized by Department of physics Velammal Engineering College, Chennai on 4th April 2018.

- Presented paper entitled “ Influence of dielectric confinement on the binding energy of excitation in a strained quantum dot” at the National Conference on Emerging Trends in Renewable Energy and Innovation in Materials Science (NETREIMS-19) Organized by PG & Research Department of Physics, Thiru Kolanjiappar Government Arts College (Grade-1) Vriddhachalam. on 15-16 February, 2019.

- Presented paper entitled “Electron-Electron Interactions in a semimagnetic quantum dot “at the National Conference on Functional Materials and its APPLICATIONAL Aspects (NCFMAA-2020) Organized by the Department of Materials Science, Institute of Science and Humanities, Saveetha School of Engineering (SIMATS) Chennai on 5th -6th March 2020.

- Presented paper entitled “Optical Properties of exciton in a strained $\text{Zn}/\text{Zn}_x\text{Mg}_x\text{O}$ Quantum well” at the International Conference on Advanced Materials for energy and Environmental Applications (ICAMEA-2020) Organized by PG & Research Department of Physics, Thiru Kolanjiappar Government Arts College in association with Indian Science and Technology Association Vriddhachalam. 20 & 21 February 2020.

- Presented paper entitled “Synthesis & Characterisation of Tin Doped Calcium Titanate (CaTiO_3) For two different Temperatures” at the International Conference on Advancements in Theoretical, Experimental and Observational Physics (ATEOP 25) Organized by PG & Research Department of Physics, The Madura College, Madurai. 11th March 2025

- Presented paper entitled “Comparative Study of Synthesis and Structural characterization of

CCTO with Two different Temperatures” at the International Conference on Advancements in Theoretical ,Experimental and Observational Physics(ATEOP 25) Organized by PG& Research Department of Physics, The Madura College, Madurai. 11thMarch 2025.

- Presented paper entitled “Synthesis & Characterisation of Copper Titanate Nanoparticles Two Different Temperatures” at the International Conference on Advancements in Theoretical ,Experimental and Observational Physics(ATEOP 25) Organized by PG&Research Department of Physics, The Madura College, Madurai. . 11thMarch 2025.
- Presented paper entitled “Synthesis & Characterisation of Copper Titanate Nanoparticles Two Different Temperatures” at the International Conference on Advancements in Theoretical ,Experimental and Observational Physics(ATEOP 25) Organized by PG&Research Department of Physics, The Madura College, Madurai. . 11thMarch 2025.
- Presented paper entitled “Synthesis & Characterisation of Tin Doped Calcium Titanate(CaTiO_3)For two different Ratios” at the International Conference on Advancements in Theoretical ,Experimental and Observational Physics(ATEOP 25) Organized by PG&Research Department of Physics, The Madura College, Madurai. . 11thMarch 2025.
- Presented paper entitled “Comparative Study of Zinc Tin Oxide(ZnSnO_4)Prepared for Two Temperatures Using the Hydrothermal method “at the National Conference on Recent Trends in Sustainable Energy Materials (NCRTSEM-2K26)Organized by PG & Department of Physics and Department of Chemistry, Mannar Thirumalai Naicker College, Madurai,24th February 2026.
- Presented paper entitled “Synthesis,Phase analysis and property evaluation of Tin Doped calcium Titanate with varying Compositions” at the National Conference on Recent Trends in Sustainable Energy Materials (NCRTSEM-2K26)Organized by PG & Department of Physics and Department of Chemistry, Mannar Thirumalai Naicker College, Madurai,24th February 2026.
- Presented paper entitled “Sol-Gel derived Sn- Modified CaTiO_3 Perovskite:Structural and Physiochemical characteristics. at the National Conference on Recent Trends in Sustainable Energy Materials (NCRTSEM-2K26)Organized by PG & Department of Physics and Department of Chemistry, Mannar Thirumalai Naicker College, Madurai,24th February 2026.

National , International Conferences Participated

- “National conference on Recent Trends in Physics of Materials (NCRTPM-2018) organised by P G & Research Department of Physics, Pachaiyapp’s College, Chennai February 2018.
- “International conference on Advancements and Challenges in Chemical Science” (ICACC S-2018) organised by PG & Research Department of Chemistry, Pachaiyapp’s College, Chennai February 2018.
- "National Conference on Emerging trends in Renewable Energy and innovation in material science (NCTREIMS-19) organised by PG & Research Department of physics, Thirukolanjiappar government arts College (grade-1) Vriddhachalam-606001 during 15-16 february, 2019.
- 2nd International conference on materials for energy and Environment organized by Loyola Institute of Frontier Energy (Life), Loyola College, Chennai on 20-21 February 2020.
- International conference on Advanced for Energy and Environmental applications ICAME A-2020 Organized by Thiru Kolanjiappar Govt, Arts College, Vriddhachalam 606001 on 20-21 February 2019.
- National conference on Functional Materials and its Applicational Aspects (NCFMAA-2020) organized by Saveetha Engineering College, Chennai on 5-6 march 2020
- “International seminar on Advanced Nano-materials” (ISAN-18) organised by National Centre for Nano science & Nano- Technology, University of Madras. February 2018.
- “National Conference on Nano Materials, NLO Materials and Nonlinear Dynamics” (NCNN N18) organized by Department of Physics Velammal Engineering College Chennai.
- Faculty Research Programme, Two days special programme on the theme “ Dynamics of Research Publications ” organized by Mannar Thirumalai Naicker College, Madurai On. 15.09.2022 to 16.09-.22
- International Conference on Recent Advancement in Material Science and its applications (ICRAMSA’23) organized by PG Department of Physics, Mannar Thirumalai Naicker College, Madurai from 11-01-23 to 12-01-23
- International Conference on Advancement in theoretical experimental and observational physics (ATEOP 25) Organized by PG Department of Physics, The madura college, Madurai.
- International Conference on Emerging Frontiers in nanoscience and modern physics (ICENMP-2025) Organized by PG & Research Department of physics, Sree Sevugan

Annamalai College, Devakottai. December 2025.

ONLINE SEMINARS ATTENDED

- National Webinar on Recent trends in physics of materials (NWRTPM2020) organized by the PG and Research department of physics Pachaiyapp's College Chennai-600030. June 24-2020
- National webinar on "Material technology and Research perspectives in physics .organized by PZ and Research department of physics Marutharkesari Jain College for women, Vaniyambadi 15.06.2020 to 17.06.2020
- "Physics webinar series "organized by Department of physics justice Basheer Ahmed Sayeed College for women 26.05.2020 to 28.05.2020.
- International Webinar on Recent Trends in Physics organized by Dept of Physics Sourashtra College Madurai-625004 on 28 November 2020
- International webinar on Astrophysics (IWOA-2021) Organized by research centre of physics, Fatima College, Madurai 30.09.2021

ORGANIZING SECRETARY

- One day National seminar on Global Science: Evolution of Physics in Global Context organized by PG & Research Department of Physics, Raja Dorai Singam Govt. Arts College, Sivagangai on 28-02-23.
- Five days in service training programme for Science Teachers of Sivagangai District on Hands on Training in Physics Lab organized by PG & Research Department of Physics, Raja Dorai Singam Govt. Arts College, Sivagangai from 08-01-24 to 12-01-24 (Sponsored by Tamil Nadu State Council for Science & Technology., Chennai.
- . Seminar on "The Einstein Paradigm: Transforming Modern Scientific Revolution" in commemoration of Einstein's Day-2026 Organized by Department of Physics, Yadava College, Madurai. on 18th March 2026.

Faculty Development Programme (FDP)

- Faculty Development Programme (FDP) Six days organized by Tamil Nadu Skill Development Corporation, Government of Tamil Nadu under Nan Muthalvan Scheme at Alagappa University, Karaikudi from 16-06-2025 to 21-06-2025

OTHER ACTIVITIES

- **UGC-** Sponsored State level seminar on “Progress in condensed matter physics” organized by research centre and P.G. department of physics the Madura College, Madurai- January 2015.
- One day intercollegiate “workshop on women Empowerment and self development” Organized by Idhaya College for women. Sarugani on 2th-March 2007.
- National service scheme (NSS) Ten day special Camping programme on the theme “youth’s participation in water Resource Management” organised at Pallithamma village at Sivagangai(dt) On 27.01.05 to 05.02.05.