

Susaiammal Arokiasamy, B.Sc., B.Ed., M.Sc., Ph.D.

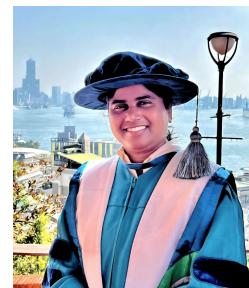
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Education

Jan.2024	■ Ph.D. in Computational Material Physics , National Sun Yat-sen University, Kaohsiung, Taiwan.
May 2021	■ B.Ed. , Ch.Charan Singh University, Meerut, India.
May 2016	■ M.Sc. in Physics , St. Aloysius College (Autonomous), Mangalore, India.
May 2013	■ Diploma Course in Theology , Jnana Deepa Institute of Philosophy and Theology, Pune, India
May 2012	■ B. Sc. in Physics, Mathematics, Computer Applications , St. Bede's College, Shimla, India

Experience

June 2025 – till date	■ Assistant Professor , St. Aloysius (Deemed to be University), Mangaluru, India.
July 2024 – Oct. 2024	■ Assistant Professor , St. Bede's College, Shimla, India.
July. 2021 – Dec.2023	■ Teaching and Research Assistant , National Sun Yat-sen University, Kaohsiung, Taiwan.
Jan. 2018 – Dec.2019	■ Assistant Professor , St. Joseph's College (Autonomous), Jakhama, India
Jan. 2017 – Dec.2017	■ Lecturer , St. Bede's College, Shimla, India
Oct. 2016 – Dec.2016	■ Lecturer , St. Joseph's Girls Degree College, Meerut, India
July 2016 -Oct. 2016	■ Lecturer , St. Bede's College, Shimla, India

Scholarships, Awards and Achievements

July 2025	■ BEST LIBRARY USER AWARD , Certificate of Recognition is awarded for optimal use of the library's learning resources for the month of July, St. Aloysius (Deemed to be University), Mangaluru, India.
2020-2023	■ Elite Doctoral Student Scholarship , National Sun Yat-sen University, Kaohsiung,Taiwan
2021-2023	■ Strengthening Cooperation and Exchange Plan with ASEAN and South Asian Countries R and D Elite Talent Professional class , Ministry of Education, Taiwan
Jan.2023	■ AAPPS Award , For excellent performance in oral presentation at annual meeting of TPS2023. Presented by Association of Asian Pacific Physical Society, TPS2023, Taiwan.
Apr.2021	■ For the successful participation and achievement of First Position In International Essay Writing Competition On Out Break of COVID-19: its impact and Assessment on Indian Economy
Apr.2016	■ Best Outgoing Student Award , Presented by St.Aloysius College, (Autonomous) Mangalore, India
Nov.2016	■ Rank Certificate , For securing 2nd rank in M.Sc. Physics, presented by St.Aloysius College, (Autonomous) Mangalore, India

Scholarships, Awards and Achievements (continued)

Dec.2012  **Zeitler Memorial Essay-Third Prize**, Presented by Ishwani Kendra for Missiology, Pune, India

Jan.2012  **National Essay-Third Prize**, Presented by Petroleum and Natural Gas Conservation Research Association, New Delhi, India

Courses on DFT/ Research/SWAYAM or NPTEL Courses/FDPs Attended

Sept. 2025 - Nov. 2025  **Online course for women religious: Sisters Reporting from the Margins: Journalism skills for religious sisters**, offered by the Dicastery for Communication, Vatican.

June.2025  Faculty Development Program (FDP) on **Density Functional Theory Modelling of Advanced Materials (DFT -Advanced)** organized by the Centre for Advanced Computational Research, Delhi from 9th June to 18th June 2025 via Online Mode.

May.2025  **Deep learning for physicists** an online Micro-credit course, National Sun Yat Sen University, Kaohsiung, Taiwan.

Feb.2025  Completed the **Tanmaya Sadhana** course at Sadhana Institute, Lonavala—an intensive program in integral human formation combining psychology, spirituality, and personal transformation from 6th January to 28th February.

Oct.2024  Completed the **NEP 2020 Orientation and Sensitization Programme under Malaviya Mission Teacher Training Programme (MM-TTP)** of University Grants Commission (UGC) Organized by Malaviya Mission Teacher Training Centre, Himachal Pradesh University, Shimla from 23rd September to 1st October.

Mar 2024  **One-Day Workshop on Artificial Intelligence and Machine Learning: Exploring Advanced AI Platforms**, Tryst 2024, IIT Delhi, India.

Mar 2022  **2022 Winter school on First Principles Computational Materials Research - Advanced Level**, NCTS-Physics Division, Taiwan.

July 2021  Taken part in the online Teachers Training on **Cyber Safety and Security** organized by Indian Teacher Education Community, led by **Ministry of Electronics and Information Technology(Meity) Government of India**.

June. 2021  **Center for Taiwan Academic Research Ethics Education Certificate of Completion**, Ministry of Education, Taiwan.

May. 2021  **2021 Spring school on First Principles Computational Materials Research - Introductory Level**, NCTS-Physics Division, Taiwan.

Feb. 2021  **20th International Workshop on Computational Physics and Materials Science: Total Energy and Force Methods**, International Center for Theoretical Physics, Italy.

Nov. 2020  Participated the Virtual National Workshop on **Biomaterials: Design, Development and Scope for Future Generation** during November 03-07, 2020 organized by the Department of Mechanical Engineering, **National Institute of Technology Manipur**, Langol under the sponsorship of **Technical Education Quality Improvement Programme (TEQIP)-III**.

Aug. 2020  Participated in two days **Faculty Development Program on Online Teaching Tools** organised by Department of Computer Science, St. Bede's College, Shimla

Courses on DFT/ Research/SWAYAM or NPTEL Courses/FDPs Attended (continued)

Feb. 2017

- Completed the course, 'Developing Soft Skills and personality' through NPTEL online Certification with DISTINCTION 90% from IIT Kanpur.

Workshops/Seminars Attended

2020

- Participated in **National Webinar on New Education Policy (NEP) 2020 Forward Looking Policy**, ST. JOSEPH'S GIRLS DEGREE COLLEGE, Sardhana(Meerut) U.P.
- Participated in International e-Conference on "**Recent Trends in Advancement of Mathematical and Physical Sciences**", Deva Nagri College, Meerut.
- Participated in the International Virtual Conference on **Physics of Solid State Materials**, St. Aloysius College (Autonomous), Mangalore.
- Participated in a webinar on **Low Dimensional Physics:A New Paradigm**, Department of Physics, St Joseph Engineering College, Mangaluru.

2018

- Participated in the National workshop on, "**Advances in Production and Material Science Engineering**" organized at NIT Nagaland.

2016

- Participated in the one-day workshop on **INNOVATIONS IN MEDICAL INSTRUMENTATION** held at St. Aloysius College, Mangalore.
- Participated in the National Workshop on **Theoretical Physics** held at Alva's College, Moodbidri, Karnataka.

2015

- Participated in one-day seminar on **THEORETICAL ASPECTS OF PARTICLE AND HIGH ENERGY PHYSICS** held at St. Philomena College, Puttur Karnataka.
- Attended in the one-day lecture series titled "**Theory Fest: Celebrating Concepts in Theoretical Physics** organized by PHYSIKA at SDM College, Ujire, Karnataka.
- Participated in the National Seminar "**SAGA OF LIGHT**" organized by the Department of Physics at St. Aloysius College, Mangalore.
- Participated in the KSCSTE sponsored "**National seminar on OPTICS AND PHOTONICS**" organized by Payyanur College, Kerala.

2014

- Participated in the National Seminar on **X-Ray Crystallography** organized by the Department of Physics and Chemistry at St. Aloysius College, Mangalore.

2011

- Attended UGC National Workshop Cum Seminar on **Physics Education Research: Research based Reforms in Physics Instruction** held at St. Bede's College.

2004

- Completed the **SPIRITUAL HUMAN YOGA INDIA** the level 3 seminar in Human and Universal Energy.

Membership in Professional Bodies

Dec. 2025 – Present

- Cognate/Reciprocal Society Member, Australian Institute of Physics(AIP).

Membership in Professional Bodies (continued)

Apr.2024 –present █ **Member at Division of Condensed Matter Physics, Association of Asia Pacific Physical Societies(DCMP-AAPPS).** Membership ID: DCM-PCPST388NJMH.

Dec. 2020 –present █ **Member of the Taiwan Physical Society (TPS) and TG3.1: Computational quantum materials.**

Dec. 2020 – Dec. 2021 █ **Member of the American Physical Society (APS).**

Jan. 2018 – Dec. 2019 █ **Management and Governing Board member,St. Joseph's College (Autonomous), Jakhama, India.**

Skills

Languages █ Strong reading, writing and speaking competencies for English, Tamil, Hindi.

Language Proficiency Tests █ **TOEIC Listening and Reading test**, TOEIC total score: 830 out of 990 (Dec. 2022) Taiwan.

Coding █ Python, Matlab, Mathematica, ...

DFT Research Packages █ VASP, Quantum ESPRESSO.

Misc. █ Academic research, teaching, effective communication, self-motivated, committed, determined, goal-oriented, community-minded, hardworking, and multitasking.

My Peer Reviews

2025 **Journal of Physics: Condensed Matter (IOP)**(3 peer review records of 1 manuscripts).

2022 **Chinese Journal of Physics (TPS, Taiwan)**(2 peer review records of 1 manuscripts).

Research Publications

Journal Articles

- 1 S. Arokiasamy, G. M. Macam, S. P. C, *et al.*, “**Electronic, magnetic, and topological properties of ferromagnetic 2D perovskite-type oxides**,” *New Journal of Physics*, 2024, ISSN: 1367-2630. DOI: <https://doi.org/10.1088/1367-2630/ad9be0>.
- 2 R. K. M. M. S. M. S. A. T. S. M. G. M. A. I. V. P. A. A. J. T. N. Myasoedova, “**Synergetic FeMoSe@NiCo-LDH hybrid heterostructures as a stable and effective bifunctional catalyst for sustained overall water splitting and seawater splitting**,” *Journal of Alloys and Compounds*, 2024, ISSN: 0925-8388. DOI: <https://doi.org/10.1016/j.jallcom.2024.175389>.
- 3 S. Arokiasamy, G. M. Macam, R. A. B. Villaos, *et al.*, “**Prediction of quantum spin Hall and Rashba effects in two-dimensional ilmenite oxides**,” *Chinese Journal of Physics*, vol. 86, pp. 242–254, 2023, ISSN: 0577-9073. DOI: <https://doi.org/10.1016/j.cjph.2023.09.022>.

Conference Proceedings

- 1 S. Arokiasamy, G. M. Macam, R. A. B. Villaos, *et al.*, “**Prediction of Quantum Spin Hall and Rashba Effects in Two-Dimensional Pristine and Janus Ag-Doped AuBiO Monolayers**,” in *Wagga2026/AC2MP2026*, The 48th Annual Condensed Matter and Materials Meeting in conjunction with the 6th Asia-Pacific Conference, Wagga Wagga, NSW, Australia, 2026.
- 2 S. Arokiasamy, G. M. Macam, R. A. B. Villaos, *et al.*, “**Quantum spin Hall, van Hove singularities, and Rashba effect in two-dimensional perovskite oxides**,” in *Taiwan Physical Society Annual Meeting 2023*, Taiwan, 2023.

Poster Presentations

- 1 S. Arokiasamy, G. M. Macam, S. P. C, *et al.*, **Quantum anomalous Hall effect in Hematene-type two-dimensional perovskite oxides**, Taiwan Physical Society Annual Meeting 2024, Taiwan, 2024.
- 2 S. Arokiasamy, G. M. Macam, R. A. B. Villaos, *et al.*, **Prediction of quantum spin Hall and Rashba effects in two-dimensional perovskite oxides**, NCTS-KIAS Workshop on Ab Initio Approaches to Quantum Materials, Taiwan, 2023.

PhD Dissertation

- 1 S. Arokiasamy, **First-principles study on the topology of two-dimensional perovskite- type oxides**, PhD dissertation, 2024. URL: https://ethesys.lis.nsysu.edu.tw/ETD-db/ETD-search-c/view_etd?URN=etd-0022124-172614.

PhD Colloquium

- 1 S. Arokiasamy, **First-principles study on the topology of two-dimensional ABO_3 materials**, PhD Colloquium, 2024. URL: <https://phys.nsysu.edu.tw/static/file/181/1181/img/985968005.pdf>.

Articles Under Review

2025

- Highly entangled magnetodielectric, magnetostriction, and spin-phonon coupling phenomena in a chiral incommensurate antiferromagnet **Ni₂ScSbO₆**, Neha Patel, Arkadeb Pal, C. W. Wang, G. R. Blake, J. Khatua, T. W. Yen, Susaiammal Arokiasamy, H. S. Kunwar, Y. C. Lai, Y. C. Chuang, V. Sathe, Kwang-Yong Choi, H. D. Yang, Sandip Chatterjee, <https://doi.org/10.48550/arXiv.2503.06043>
- Anomalous Hall, Nernst, and Spin Hall effects in CoMnCrGa: A first-principles study, Manuscript reference: JPCM-125741, (Journal of Physics: Condensed Matter), Anurodh Sharma, Srivani Javvaji, Lakhansingh Kowachi, Abhipsha Pattnaik, Hrishikesh Sinha, Susaiammal Arokiasamy, CH. Prashanth, Mitch Chou, Shiu-Ming Huang, and P. Rambabu

2026

- Synthesis, Crystal Structure, Multifunctional Properties and Computational Study of 4 DMAT: A Heteroaromatic Chalcone with Antioxidant, Corrosion Inhibition, and Third-Order Nonlinear Optical Activity, Manuscript reference: MRB-D-26-00038, (Materials Research Bulletin), Divya Shetty; Narasimha Raghavendra; Suman Rani; Susaiammal Arokiasamy; P. Rambabu; Bheemalingam Chittari; Akash Bag; Neelamma B. Gummagol