

Faculty Profile



Dr. S. Sandhiyaa, M.E., Ph.D.
Assistant Professor- ECE

HIGHLIGHTS:

- Number of Journal Publications: 5
- H-Index: 4
- Project Funding Received: No
- Patents Published: 5
- Patents Granted: 1

PROFESSIONAL LINKS:

- Scopus ID: 57443321000
- Scopus Link: <https://www.scopus.com/authid/detail.uri?authorId=57443321000>
- Google Scholar ID:
- Anna University Faculty ID: 2678091995
- AICTE Faculty ID: 1-44644742594
- Anna University Supervisor ID: nil
- LinkedIn: Sandhiya Sandhi

PROFESSIONAL BACKGROUND:

- Teaching Experience till date: 2 year 3 months
- Industrial Experience: nil

AREA OF SPECIALIZATION:

- Underwater Wireless Sensor Network
- Wireless Communication
- Wireless Network

Ph.Ds AWARDED WITH DETAILS:

S:No	Name of Scholar	Title of Thesis	Year of Completion	Full Time/Part Time

Ph.Ds GUIDING:

- **Full Time Scholars: nil**
- **Part Time Scholars : nil**

SPONSORED RESEARCH / FUNDING APPLIED / CONSULTANCY:

- Nil

PATENTS PUBLISHED/GRANTED:

- Topic: Secure Energy Oriented Multi-Objective Optimization Technique for WSN

Status: Published/Application Date: 01/09/2023, Application No. 202341049110 A

- Topic: Edge Computing Framework for Real-time AI Inference and Decision Making in Autonomous Vehicles

Status: Published

- Topic: Bio-inspired Neural Network Architecture for Real-Time Power Grid Optimization and Fault Detection.

Status: Published

- Topic: Secure Energy Oriented Multi-Objective Optimization Technique for WSN

Status: Published

➤ Topic: Secure multi-party computation in blockchain networks with ai-driven optimization

➤ Topic: Blockchain credential device for HR application.
Status: Published

ACHIEVEMENTS AND AWARDS:

- Best Poster Presentation Award in SRM University in 2022

SPECIAL SESSIONS DELIVERED:

- Nil

Journal Publications:

- Early Symptom Plant Leaf Pathology Recognition via Hybrid Spatiotemporal Deep Intelligence Framework has been published in **IEEE Xplore** in September 2026.
- Block chain Enabled Cyber Threat Intelligence and Social Network Analysis for Homeland Security” has been published in **frontiers in health informatics** is published in frontiers in health information in dec 2024.
- A cross-layer approach for load balancing and energy-efficient QoS-based routing reliability for UWSN”, is published in Elsevier **Alexandria Engineering Journal**, <https://doi.org/10.1016/j.aej.2023.11.019>, **IF- 6.8 (SCI)** in **2023**.
- Efficient Routing Protocol with Localization Based Priority & Congestion Control for UWSN” published in **CMC-Computers, Materials & Continua publication**, DOI: 10.32604/cmc.2023.032298, **IF-3.860 (SCI)** in **2022**.
- Performance Analysis of Routing Protocol in Underwater Wireless Sensor Network," published in **IEEE Xplore**, 2022, pp. 1077-1084, Doi: 10.1109/ICSCDS53736.2022.9760816. (Scopus Indexed)
- A Survey on underwater wireless sensor networks: challenges, requirements, and opportunities, “published in **IEEE Xplore**, 2021, pp. 1417-1427, Doi: 10.1109/I-SMAC52330.2021.9640791. (Scopus Indexed)

CONFERENCES/SEMINARS/WORKSHOPS ATTENDED:

- Intelligent Intrusion Detection and Prevention Systems: The Role of AI and Machine Learning, International Conference Smart Technologies for Sustainable Development Goals, organized S.A Engineering College, Chennai held on August 19-21 2026.
- SOMQFWA-UNet: A Hybrid SOM-Quantum Optimization and Attention U-Net Framework for UAV Agriculture, International Conference Smart Technologies for Sustainable Development Goals, organized S.A Engineering College, Chennai held on August 19-21 2026.
- Early Symptom Plant Leaf Pathology Recognition via Hybrid Spatiotemporal Deep Intelligence Framework, International Conference Smart Systems and Inventive Technology, organized SR University, Telangana held on July 28-31 2026.
- Performance Analysis of Bio-Inspired Hybrid Optimization Algorithms for Energy Efficient in Underwater Wireless Sensor Networks, International Conference on Research in Electronics Engineering and Communication Techniques (ICREACT 23)", organized by SRM Institute of Science and Technology, Vadapalani, Chennai held on May 03-04 2023.
- An Enhanced Congestion Detection and Avoidance in Underwater Wireless Sensor Network, International Conference on Research in Electronics Engineering and Communication Techniques (ICREACT 22)", organized by SRM Institute of Science and Technology, Vadapalani, Chennai held on May 02-03 2022.
- Performance Analysis of Routing Protocol in Underwater Wireless Sensor Network, International Conference on Sustainable Computing and Data Communication Systems ", organized by Shree Venkateshwara Hi-Tech Engineering College, erode held on April 07-09 2022.
- A Survey on Underwater Wireless Sensor Networks: Challenges, Requirements and Opportunities", International Conference on I-SMAC (IoT in Social, Mobile, Analytics and cloud) conducted by SCAD Institute of Technology, Coimbatore held on November 11-13 2021.
- Comparative Study on Localization Algorithms, International Conference on Emerging trends in Signals Systems and Information (ICETSSI), organized by Nehru College of Engineering and Research Centre, Kerala held on May 26-28 2021.
- A Review on Recent issues and challenges in Underwater Wireless Sensor Network, International Conference on Recent Intelligent Technology in Science, Engineering, Humanities and Management, conducted by Cheran college of Engineering, Karur held on Feb 24-26 2021.

FDP:

- Participated in faculty development program on, "Advanced Optimized Technology using MATLAB", during the period feb 17- 28 2025 conducted by Electronics & ICT Academies MNIT Jaipur, IIITDM Jabalpur, IIT Roorkee, IIT Guwahati, NIT Patna, & NIT Warangal.
- Participated in faculty development program on, "Internet of Things", during the period 27/08/2024 to 31/08/2024 conducted by SRM Institute of Science and Technology, Ramapuram, Chennai.
- Participated in faculty development program on "Block Chain Technology", during the period 23/07/2021 to 25/07/2021 conducted by SRM Institute of Science and Technology.
- Participated in faculty development Program on "Simulation and Emulation of self-Organized in NS-3" during the period 06/10/21 to 10/10/21 conducted by Kongunadu College of Engineering and Technology.
- Participated in faculty development program on "Patent Specification & drafting & Filing procedures", during the period 15/09/2021 to 17/10/21 conducted by SRM Institute of Science and Technology.
- Participated in faculty development program on "Machine learning & optimization techniques using MATLAB", during the period 23/05/2022 to 28/05/2022 conducted by SRM Institute of Science and Technology.
- Participated in faculty development program on "Advanced optimization techniques and hands-on with MATLAB/ SCILAB" during the period 08/08/2022 to 19/08/2022 conducted by Electronics & ICT Academies at MNIT Jaipur, NIT Patna & IIITDM Jabalpur
- Participated in faculty development Program on "Machine Learning and Deep Learning" during the period 11/10/22 to 15/10/22 conducted by Kongunadu College of Engineering and Technology
- Participated in faculty development program on "Connecting People to the Semiconductor Industry" during the period 5/12/2022 to 17/12/22 conducted by SRM Institute of Science and Technology.
- Participated in faculty development program on "Simulation and Emulation of Self Organized Network" during the period 17/02/2023 to 18/02/2023 conducted by Kongu Engineering College, Erode.
- Participated in faculty development Program on "Cognitive Computing" during the period 20/03/23 to 24/03/23 conducted by Vels Institute of Science and Technology, Chennai.
- Participated in faculty development program on "Advanced MATLAB programming with applications in Emerging Technologies" during the period 12/06/2023 to 17/02/23 conducted by SRMIST, Delhi NCR Campus.
- Participated in faculty development program on "Research Project Proposal", during the period 07/07/2023 conducted by SRMIST, Vadapalani Campus.
- Participated in faculty development program on "Innovative Research Techniques for Data Analysis and Interpretation", during the period 04/03/2023 conducted by SRMIST, Vadapalani Campus.

STTP:

- Participated in online short-term Training Program in “Emerging Trends and Research Challenges in Next Gen Wireless Network” during the period 15/3/21 to 20/3/21 conducted by Kongunadu College of Engineering and Technology.
- Participated in STTP on “Machine learning algorithms for data science”, during the period 21/03/2022 to 25/03/22 conducted by SRM Institute of Science and Technology.

NPTEL Course:

- Qualitative research methods and research writing- completed on April 2026.
- Accreditation and outcome-based learning- completed on October 2025.

Workshops:

- Workshop on “Data Science”, hosted by Andhra Pradesh State Skill Development Corporation dated on FEB 12 th & 13 th 2021.
- Workshop on “Enabling Technologies for Future Wireless Communication” hosted by department of Electronics & Telecommunication, Engineering On feb 24 th & 25 th 2021
- Workshop on “Security of Vehicular Adhoc Network” on 27 th feb hosted by department of ECE, Jagannath Institute of Technology.
- Workshop on “Research Methodology” department of English, Shri Muktanand College, Gangapur held on 1 st March.
- Workshop on “MATLAB & Its Application” department Electrical & Electronics Engineering, Vivekananda College of Engineering, held on 3 rd March.
- Workshop on “Workshop on Antennas” conducted by departments of Electronics communication Engineering, Agnel Institute of technology and design, Chennai dated 17.03.2021.
- Workshop on “Embedded System” conducted by Department of Electronics and Communication Engineering, Meenakshi college of engineering on 17 th & 18 th May 2021.
- Workshop on “Robotics” on 20 th May 2021 hosted by Departments of Computer Applications, Sri.G.V.G Visalakshi College for Women.
- Workshop on “Cognitive Radio Communication” conducted by Department of Electronics and Communication Engineering, Hindustan Institute of Technology on 24 th May 2021.
- Workshop on “AR & VR” conducted by Department of Computer Science, SRM Institute of Science and Technology, Ramapuram on 26 th May 2021.
- National level workshop on “Augment Reality” on 14 th & 15 th May 2021.
- Workshop on National Intellectual Property Awareness Mission conducted by SRMIST & Intellectual Property office and MoE’s Innovation cell, India on 11th January 2023.
- Workshop on “National Intellectual Property Awareness Mission” conducted by SRMIST & Intellectual Property office and MoE’s Innovation cell, India on 11 th January 2023.
- Workshop on “The Art of Effective Mentoring: A Sustained Model”, conducted by SRMIST, Kattankulathur on 19 & 20 January 2023.

Webinar:

- Webinar on “How to Improve Your Presentation and Networking Skills”, organizer by Euraxess india dated on March 12th 2021.
- Webinar on,” How to Write a Successful Phd Proposal” organizer by Euraxess India dated on Feb 26th 2021.
- Webinar on “Iot and Embedded System” conducted by Department of Electronics and Communication Engineering, SLN college of engineering on 8th June 2021

- Webinar on "Wireless Sensor Network", conducted by Department of Instrumentation and control Engineering, SNM Institute of Management And Technology on 14th June 2021
- Webinar on "5G Wireless Communication", hosted by Department of ECE, Kumaraguru College of Technology on 15th June 2021.
- Webinar on "Machine Learning", conducted by Department of IT, SNS College of Engineering Coimbatore on 22nd June 2021.
- Webinar on "R Programming & Application", conducted by G.V.R & S College of Engineering and technology on 14th July 2021.
- Webinar on "Artificial Intelligence & machine learning", conducted by Adhiprasakthi Engineering College on 15th July 2021.
- Webinar on "5G Communication", conducted by PVKK Institute of Technology on 16th July 2021.
- Webinar on "IEEE Authorship and OA symposium", conducted by IEEE Advancing Technology for Humanity on 26th August 2021.
- Webinar on "Recent trends in cloudification of enterprise application", conducted by Amrita Vishwa Vidyapeetham held on 26th Feb 2022.
- Webinar on "Impact of the Artificial Intelligence in Technological Development", conducted by Dambi Dollo University, Ethiopia on 27th January 2023.

PROFESSIONAL MEMBERSHIPS:

- Nil

OTHER DETAILS (If any):

- **Research Scholar (FT) Department of Electronics and Communication Engineering (ECE) SRM Institute of Science and Technology, Vadapalani Campus, Chennai from July 2020 to May 2024.**