

Name : Dr. Lavanya A.

Mobile No. : +91 8489796243

Email : lavanyaanbzhagan04@gmail.com

LinkedIn : <https://www.linkedin.com/in/lavanya-anbzhagan-614767227/>



EDUCATIONAL QUALIFICATION:

S. No.	Degree	Year	Major/ Board	Institution/University	CGPA (Out of 10)
1.	Ph. D	2019-2022	Information & Communication	College of Engineering Guindy, Chennai/ Anna University	NA
2.	M.E	2017-2019	Communication Systems	College of Engineering Guindy, Chennai/ Anna University	8.87
3.	B.E	2011-2015	Electronics and Communication Engineering	Thiagarajar College of Engineering, Madurai/ Anna University	9.36

Ph.D. RESEARCH TITLE:

Photonic Crystal Fiber - based Enabling Devices for Optical Communication Applications

TECHNICAL EXPERTISE:

Technical Software Tools : COMSOL Multiphysics 5.2a, Matlab

Programming Languages : C, Java

PUBLICATIONS:

1. **Lavanya A.**, Raj, B. L., Robinson, S. R., & Abhay, K. S. (2026). Improving Cancer Diagnostics: A Study on SPR–PCF Biosensors for Basal Carcinoma Cells. In M. Anusuya & F. I. Ezema (Eds.), *Advanced Materials for Biomedical Devices: Insights from AI and Nanotechnology* (pp. 133–143). CRC Press / Taylor & Francis Group. <https://doi.org/10.1201/9781003651772-13>.
2. **Lavanya A.**, R. Jansi, and P. Sudhanya, “Machine-Learning-Enhanced Polarization Splitter in Silicon-Integrated Dual-Core Photonic Crystal Fiber,” in *Next Generation Wireless Communication*, edited by M. El Ghzaoui, S. Das, V. Samudrala, and N. R. Medikundu, *Signals and Communication Technology*, Springer, Cham, 2024, pp. 509–525, doi: 10.1007/978-3-031-56144-3_30.
3. **Lavanya A.**, P. Sudhanya, and R. Jansi, “Characteristics Analysis of Different Photonic Crystal Fiber Lattice Structures,” *Journal of Optics and Photonics Research*, vol. 1, no. 2, pp. 67–73, Oct. 2023, doi: 10.47852/bonviewJOPR32021705.
4. **Lavanya A.**, and G. Ganesan, “Polarization-independent wavelength splitter based on silicon nanowire embedded dual-core pentagonal lattice photonic crystal fiber for optical communication systems,” *Optical Engineering*, vol. 60, no. 4, pp. 1–13, 2021, doi: 10.1117/1.OE.60.4.047103.
5. **Lavanya A.**, and G. Geetha, “Broadband polarization filter based on hybrid silver-graphene coated pentagonal photonic crystal fiber,” *Optical and Quantum Electronics*, vol. 53, no. 2, p. 117, 2021, doi: 10.1007/s11082-021-02767-5.
6. **Lavanya A.**, and G. Geetha, “A novel hybrid hexagonal photonic crystal fibre for optical fibre communication,” *Optical Fiber Technology*, vol. 59, p. 102321, 2020, doi: 10.1016/j.yofte.2020.102321.
7. B. Barath Kumar, B. Hanush, and **Lavanya A.**, “Advanced Photonic Crystal Fiber Sensor Design For Efficient Air Pollution Detection,” in *2025 IEEE International Students’ Conference on Electrical, Electronics and Computer Science (SCEECS)*, Bhopal, India, Jan. 2025, pp. 1–5, doi: 10.1109/SCEECS64059.2025.10940368.
8. **Lavanya A.** “Broadband Light Source For Optical Communication Applications Using Silicon Nanowire Embedded Pentagonal Photonic Crystal Fiber,” in *5th International Conference on Optical and Wireless Technologies (OWT-2021)*, LNEE, Springer, vol. 892, pp. 143–154, 2021, doi: 10.1007/978-981-19-1645-8_15.
9. **Lavanya A.**, M. Jeevitha, and M. A. Bhagyaveni, “IoT-Enabled Green Campus Energy Management System,” *International Journal of Embedded Systems and Applications (IJESA)*, vol. 9, no. 2, pp. 21–35, 2019, doi: 10.5121/ijesa.2019.9203.
10. **Lavanya A.** and M. A. Bhagyaveni, “Architecture for IoT-enabled Green Campus,” in *2nd International Conference on Signals System and Communication (ICSSC 2019)*, College of Engineering Guindy, India.
11. R. Raja, S. Md. Mansoor Roomi, **A. Lavanya**, and S. Ishwarya, “Survey on scene classification approaches,” *International Journal of Applied Engineering Research (IJAER)*, vol. 10, no. 20, pp. 19332–19337, 2015.

WORK EXPERIENCE:

- Worked as System Engineer for a period of two years from 2015-2017 in Tata Consultancy Service, Chennai, India.
- Currently working as an Assistant Professor in the Department of Electronics and Communication Engineering at SRM Institute of Science and Technology, Kattankulathur, Chennai since August 2022.

AWARDS AND RECOGNITIONS:

- Awarded Anna Centenary Research Fellowship during the doctoral degree
- Qualified UGC NET-2018 for Assistant Professor in Electronic Science.
- Qualified GATE in 2017.
- Received Star performer of the quarter award from Tata Consultancy Service for Hosted OSS and BSS Solutions (HOBS) project.
- Received certificate of appreciation for the contribution of work toward IoT Information Exchange Platform (British Telecom Project).

CO-CURRICULAR ACTIVITIES:

Online Courses & Certifications

- TCE Online Certification – Discrete Time Signal Processing (Feb 2025 – Mar 2025): A 4-week value-added course covering signals and systems, DFT/FFT algorithms, filters, and quantization.
- Online Course – Basics of Remote Sensing, GIS & GNSS (Aug 27 – Nov 22, 2024): A comprehensive 52-hour training in geospatial technologies.

Faculty Development Programmes

- Orientation Program on Technical Education and Curriculum Aspects by NITTTR (Sept 2024).
- Faculty Induction Training Programme: A structured 16-day training conducted by the Directorate of Learning and Development, SRM IST.
- “Making Difference in Innovation: IPR as Catalyst for Progress” (FDP) (Aug 19–23, 2024).
- IEEE EDS Mini-Colloquium on Semiconductor Emerging Technologies (Aug 8–9, 2024).
- FTP: Deep Learning Using Python (May 13–17, 2024).
- FTP: Machine Learning Using Python (Dec 4–9, 2023).
- FRAP Express training session (Dec 20–21, 2023).
- Workshop on Cognitive Analytics and Its Applications (Sept 21–22, 2023).

Specialized Training & Short-Term Programs

- DST-SERB School in Photonics Phenomena, Materials & Devices, Anna University (3 weeks).
- IoT Skill Development Course (Students & Professionals) – CSIR-CEERI, Chennai (6 weeks; awarded *Grade of Excellence*).
- BSNL Silver & Gold Certified Engineer Programs – BSNL-AICTE Employability Enhancement Training (18-week Silver, 16-week Gold; both awarded *Excellence*).
- ATAL FDP – Photonics, IIIT Ranchi (1 week).
- RTOE-2020: Recent Trends in Optical Engineering, SVNIT Surat (1-week online training).
- International Webinar Series on Nanomaterials, RGUKT Andhra Pradesh (3 days).
- ATAL FDP – Sensors Technology, NITTTR Chandigarh (1 week).
- In-Plant Training, Doordarshan Kendra, Coimbatore (5 days).
- IEEE Seminar-cum-Workshop on Photonics & Optical Networks, IEEE Photonics Society (Madras Chapter) at S.A. Engineering College (3 days).

LEADERSHIP & ACADEMIC SERVICE

- Organized the *International Conference on Recent Advances in Electrical, Electronics, Ubiquitous Communication & Computational Intelligence (RAEEUCCI-2024)*, held at SRM Institute of Science and Technology, Chennai, India, April 17–18, 2024.
- Coordinated the focus on SDG-5: Gender Equality for the *3rd International Conference on Higher Education Institutes' Challenges and Solutions for Sustainable Development Goals 2024 (ICSDG-2024)*, held December 3–5, 2024, organized by SRMIST
- Served as Faculty Advisor, guiding and mentoring the student Batch 2022–2025.
- Course Coordinator for:
 - *Microprocessor, Microcontroller, and Interfacing Techniques*
 - *Digital Logic Design*
- Major Project Panel Member, evaluating and advising on student capstone and final-year projects.
- Member, Seating Arrangement Team, Exam Cell — ensuring smooth logistics and execution of examination seating arrangements.
- Anti-Ragging Squad Member (2023) — actively contributing to campus safety and student welfare.
- Member, Seating Committee for the *19th Convocation* — involved in planning and organizing seating arrangements for convocation ceremonies.