

Faculty Profile



K. ANITHA, M.E., (Ph.D.)
Assistant Professor (Senior Grade)

HIGHLIGHTS:

- Number of Publications: 19
- H-Index: 3
- Patents Published: 1
- Teaching Experience: 13 Years

PROFESSIONAL LINKS:

- Scopus ID: 58065910000
- Google Scholar Profile: <https://tinyurl.com/57x5ztxa>
- ORCID: 0000-0002-8720-2232
- LinkedIn: <https://www.linkedin.com/in/anitha-k-8860065b>
- Email: anitha@saveetha.ac.in
- Mobile: +91 7871590096

PROFESSIONAL BACKGROUND:

- Teaching Experience: 13 Years
- Industrial Experience: NA

INTERNATIONAL EXPOSURE:

- Presented “Design and Simulation of MEMS-Based Electrothermal Micro Mirror for Optical Switching” at ICATEM 2019, Taylor’s School of Engineering, Malaysia.

AREA OF SPECIALIZATION:

- Paper-based microfluidics and biosensor technology
- MEMS and microelectromechanical device design
- Point-of-care diagnostic systems and biomarker detection
- Embedded systems and intelligent instrumentation
- Communication engineering

RESEARCH PROFILE AND CONTRIBUTIONS:

- Published 19 research articles in reputed international journals and conference proceedings.
- Published one patent related to paper-based microfluidic device fabrication for lipid profile analysis.
- Research work spans paper-based microfluidics, creatinine/biomarker detection, MEMS, biomedical signal processing, embedded systems, wireless sensor networks, and communication systems.
- Ph.D. research focuses on low-cost paper-based microfluidic analytical devices for rapid point-of-care biomarker detection using colorimetric sensing and fluid-flow analysis.

PATENTS PUBLISHED/GRANTED:

- The patent for “Fabrication of Paper-Based Microfluidic Device for Lipid Profile Analysis” was published on 2021.

COURSES CERTIFIED:

- Introduction to Virtual Reality, University of Colorado System, Coursera, May 2020.
- IUCEE International Engineering Educator Certification, October 2020.
- Six-month e-Learning Program on Basic Psychology, Student Psychology, Counselling Skills, and Methods of Counselling Students, July-December 2019.

ACHIEVEMENTS AND AWARDS:

- Received Best Faculty Award for securing 100% results during the academic year 2009-2010.

CONFERENCES/SEMINARS/WORKSHOPS ATTENDED:

- Microfluidic Lab-on-Chip (LOC) Device Design and Challenges in Biomedical Applications – AICTE ATAL Online Elementary FDP, Sri Shakthi Institute of Engineering and Technology, Coimbatore, 22–26 Dec 2021.
- Research Proposal Writing – FDP, Department of CSE in association with CSI, Velammal Engineering College, 08–09 Jan 2021.
- Advancement in Communication Engineering Technologies with Simulation Tools – International Online FDP, Department of ECE, Vishnu Institute of Technology, 01–05 Jul 2020.
- Control Systems – Online STTP, Department of ECE, Saveetha Engineering College, 20–24 Jul 2020.
- Advances in 5G Wireless Communications with Hands-on Experiences – Online FDP, Department of ECE, Lendi Institute of Engineering and Technology, 16–20 Jun 2020.
- Foundation Program in ICT for Education – FDP101x – AICTE-approved FDP, IIT Bombay, 03 Aug – 07 Sep 2017.
- Pedagogy for Online and Blended Teaching-Learning Process – FDP201x – AICTE-approved FDP, IIT Bombay, 14 Sep – 12 Oct 2017.
- Linear Integrated Circuits – Seven-day FDP, Karpaga Vinayaga College of Engineering and Technology, 02–08 Dec 2013.
- PSPICE and NS-2 – Two-day FDP, Saveetha School of Engineering, 10–11 Nov 2010.
- Innovations and Applications in Engineering Materials – One-week workshop, KIET Group of Institutions in collaboration with DRDO, online mode, 03–07 Feb 2025.
- Computer Networking – Two-week ISTE Workshop, IIT Bombay at Saveetha Engineering College, 30 Jun – 05 Jul 2014.
- Signals and Systems – Two-week ISTE Workshop, IIT Kharagpur at Saveetha Engineering College, 02–12 Jan 2014.
- Aakash for Education – Two-day ISTE Workshop, IIT Bombay at Saveetha Engineering College, 10–11 Nov 2012.
- Mission 10X – Five-day workshop, Saveetha Engineering College, 14–18 May 2012.
- Microsystem Packaging – One-day workshop, Saveetha Engineering College, 14 Jul 2009.
- MATLAB Programming – Regional-level Faculty Workshop, Saveetha Engineering College, 19 Jul 2008.
- Technical Communication for Scientists and Engineers – ISTE-STTP, IIT Bombay at Saveetha Engineering College, 08 Oct – 18 Nov 2015.

PUBLICATIONS:

- Anitha, K., Hemalatha, G., Praveenkumar, S., & Aravind, T. (2026). Precision diagnosis: An automated method for detecting congenital heart disease in children from phonocardiogram signals employing deep neural network. Recent Trends in Data Analytics and Computing (ICADAC 2025). <https://doi.org/10.1201/9781003724995-40>
- Anitha, K., Janani, B. S., Praveenkumar, S., & Aravind, T. (2026). Blockchain-powered metaverse: Decentralized crowdsourcing and marketplace for trading machine learning data and models. Recent Trends in Data Analytics and Computing (ICADAC 2025). <https://doi.org/10.1201/9781003724995-34>
- Anitha, K., Kishore Kumar, S., Praveenkumar, S., & Aravind, T. (2026). Airplane seating assignment greedy algorithms that separate passengers based on infectious disease risk. Recent Trends in Data Analytics and Computing (ICADAC 2025).
- Anitha, K., Aravind, T., Kumar, S. P., & Ram, G. D. (2025). Synthesis of biomass-derived N, S co-doped carbon dot/CuHCF composite for enhancing electrochemical sensing performance of creatinine detection. Diamond and Related Materials.
- Anitha, K., Avinash, A., Quevedo Lezana, C. R., Bharathi, C. R., & Abid, Y. (2025). Deep learning-based approaches for enhanced image compression in computer vision applications. ICDSNC.
- Anitha, K., Lavanya, V., Chitra, P., Alekhya, B., & Rajini, Y. P. (2024). Exploring the experimental effectiveness of a hybrid deep learning approach in detecting thyroid disease using intelligent predictions.
- Anitha, K., Aravind, T., & Praveen Kumar, S. (2024). Spying robot for the war field with a wireless night vision camera. AIP Conference Proceedings.
- Anitha, K., Aravind, T., & Kumar, S. P. (2024). Utilization of functionalized paper-based microfluidic devices for the detection and characterization of starch in milk. Digest Journal of Nanomaterials and Biostructures.
- Sangeetha, M., Sasikala, G., Anitha, K., et al. (2023). Machine learning-based identification of cervical cancer in patients.
- Bindhu, M., Praveen Kumar, S., Anitha, K., et al. (2023). Performance study of visible light communication through non-orthogonal multiple access (NOMA).
- Anitha, K., Aravind, T., & Kumar, S. P. (2023). Generation of electric energy by utilizing piezoelectric effect. Materials Today Proceedings.
- Ravisundar, K., Kumar, S. P., Anitha, K., et al. (2023). PZT type-8 material two-axis MEMS scanner for LIDAR.
- Anitha, K., Rajalakshmi, J., Srinivasan, S., & Kavitha, M. (2023). Efficient plant diseases classification method using hybrid genetic algorithm with ant colony optimisation algorithm.
- Anitha, K., Mahimathi, P., & Aravind, T. (2020). Design and simulation of MEMS-based electrothermal micromirror for optical switching.
- Anitha, K., Keerthiga, G., & Malini, A. H. (2019). Plant health monitoring system through image processing and defects overcoming through embedded system.
- Anitha, K., Srigitha, S., Nath, S., & Umamaheswari, S. (2018). Suppression of electromagnetic interference by spread spectrum clock generation.
- Keerthiga, G., & Anitha, K. (2018). Detecting eccentric gases using standard gas sensor nodes at hazard times.
- Malini, A. H., & Archana, K. A. T. (2018). Speed estimation algorithms in uplink frequency for mobile OFDM systems.
- Anitha, K., & Deepa Lakshmi, M. (2015). EEADRT: Energy efficient with assured delivery rate and throughput routing protocol for wireless sensor networks.

ACADEMIC CONTRIBUTIONS

- Organized MEMS Certification Course, 22 Jun – 31 Jul 2020.

- Organized Online Workshop on Internet of Things, 13–17 Jul 2020.
- Organized Online Workshop on Artificial Intelligence in Healthcare, 09 Jul 2020.
- Coordinated and organized a webinar series comprising technical lectures, motivational sessions, and alumni talks during May–July 2020.

PROFESSIONAL MEMBERSHIPS:

- Life Member, Indian Society for Technical Education (ISTE), Membership No. 109080.