

## FACULTY PROFILE

**Prof. Suresh M**

**Assistant Professor | Department of Electronics and Communication Engineering  
RajaRajeswari College of Engineering, Bengaluru**

### Brief Profile

Prof. M. Suresh is an Assistant Professor in the Department of Electronics and Communication Engineering at RajaRajeswari College of Engineering, Bengaluru, with over 12 years of teaching experience. He holds a B.E. in Electronics and Communication Engineering and an M.E. in Applied Electronics, and has completed his Ph.D. Comprehensive Viva in Biomedical Image Processing. His research area is Medical Image Processing with Deep Learning. He has contributed to teaching, curriculum development, academic quality initiatives, student mentoring, research supervision, publications, patents, conferences, faculty development programmes, and research proposals.

### Academic Qualifications

| Qualification                                                         | Institution / University                             |
|-----------------------------------------------------------------------|------------------------------------------------------|
| Ph.D. – Biomedical Image Processing<br>(Comprehensive Viva Completed) | Kalasalingam Academy of Research and Education       |
| M.E. – Applied Electronics                                            | PSNA College of Engineering, Anna University         |
| B.E. – Electronics and Communication Engineering                      | Bharath Niketan Engineering College, Anna University |

### Research Interests

- Medical Image Processing
- Deep Learning
- Artificial Intelligence
- Digital Image Processing
- Biomedical Image Analysis
- Computer Vision
- Intelligent Healthcare Systems
- Applied Electronics
- Wireless Sensor Networks
- Internet of Things (IoT)
- Signal and Image Processing

### Academic Responsibilities

- Internal Assessment Coordinator
- Departmental Library In-charge
- NBA Criteria-2 Coordinator
- NAAC Criteria-1 Coordinator
- Departmental Events Coordinator
- Curriculum development and review
- Student mentoring and academic guidance
- Postgraduate research supervision

- Departmental accreditation activities
- Academic paper review

### **Selected Journal Publications**

- Water ATM with Bottle Dispenser – IJARCCCE, March 2025.
- Advancing Prosthetic Arm Control: An EMG-Based Grasp Force Estimation Towards Anthropomorphic Movement – IJCRT, April 2025.
- Smart Stroke Prediction – WJERT, August 2024.
- Sensor-Based Emotional Recognition in Face Using CNN – WJERT, November 2024.
- Energy-Efficient New Data Aggregation Method for Wireless Sensor Networks – WJERT, May 2024.
- Accident Detection and Alert System – IJARIIIE, 2023.
- Blind Navigation Using Artificial Intelligence – IJRAR, 2022.
- Deep Learning Approaches for Bone Cancer Segmentation Using X-Ray Images – IJRAR, 2022.
- Efficient Eye Blink Detection Method for Disabled – Kala Sarovar, 2020.
- Implementation of Adhoc and Relay Mode in WLAN – IJERT, 2018.
- Bone Quality Assessment Using MEMS Accelerometer – 2014.
- VLSI Based Detection & Correction Scheme for the Advanced Encryption Standard Using Composite Field – 2014.
- Automatic Multilevel Thresholding of Digital Images – 2015.

### **Conference Publications / Presentations**

- Deep Learning Models for Tuberculosis Diagnosis: A Survey on Need for Multimodal Analysis – ICTEM'25, Muscat, Oman, 2025.
- Smart IoT Systems for Predictive Stroke Analysis – International Conference on Advances in Aerospace and Navigation Systems, 2024.
- Automated Facial Emotion Detection using Arithmetic Optimization Algorithm with Deep Convolutional Neural Network for Autonomous Vehicle Drivers – ICACRS 2023.
- Efficient Eye Blink Detection Method for Disabled – ICRCST, 2020.
- Automatic Multilevel Thresholding of Digital Images – International Conference on Developments in Engineering Research, 2015.
- Bone Quality Assessment Using MEMS Accelerometer – International Conference on Current Trends in Engineering Research, 2014.
- VLSI Based Detection & Correction Scheme for the Advanced Encryption Standard Using Composite Field – International Conference on Current Trends in Engineering Research, 2014.
- Bone Quality Assessment Using MEMS Accelerometer – National Conference on Embedded Systems, NCE'13.

### **Patents**

- Machine Learning-Based Cybersecurity Threat Detection and Response System – Application No. 202541078615 A; filed 19-08-2025; published 05-09-2025.
- AI & IoT-Based Smart Agriculture Management System for Efficient Irrigation & Crop Monitoring Using Machine Learning (ML) Algorithms – Application No. 202341043483; filed 28-06-2023; published 01-09-2023.

- Cluster Electric Vehicle Charging Behaviour Optimization Method Based on Deep Reinforcement Learning – Application No. 202441029453 A; filed 11-04-2024; published 19-04-2024.
- Big Data Source to Detect the Data Leaks Using SQL and AI System – Application No. 202441057815 A; filed 30-07-2024; published 02-08-2024.

### Book Publication

Antenna Theory and Design: Fundamentals and Applications — published January 2024; ISBN 978-81-976531-5-5; 268 pages.

### Faculty Development Programmes / Training

- AICTE-ATAL Academy FDP on “Navigation with Indian Constellation: Opportunities, Challenges and Future Developments” – December 2025.
- Five-Day National Level FDP on “Competency Based Engineering Education” – Ramco Institute of Technology, February 2025.
- FDP on “Hands-on Sessions of ECE Laboratories” – RajaRajeswari College of Engineering, February 2025.
- Five-Day FDP on “Effective Curriculum Design and Evaluation Process for Autonomy” – RajaRajeswari College of Engineering, May 2024.
- AICTE-ATAL Academy FDP on “Emerging Technologies in Drone Design and Development” – ACS College of Engineering, February 2024.
- AICTE-VTU Joint Teachers Training Programme on “Introduction to Internet of Things (IoT)” – April 2023.

### Research Projects / Funding Proposals

| Project / Proposal                                  | Funding   | Role                      | Status    |
|-----------------------------------------------------|-----------|---------------------------|-----------|
| Centre for Vision and Signal Processing (K-FIST L1) | ₹11 Lakhs | Co-Principal Investigator | Submitted |
| Water ATM with Bottle Dispenser                     | ₹5,000    | Principal Investigator    | Submitted |
| Advanced Prosthetic ARM Control                     | ₹6,700    | Principal Investigator    | Submitted |
| Smart Stroke Prediction                             | ₹5,000    | Co-Principal Investigator | Approved  |
| Tech-Enabled Wildlife Conservation                  | ₹8,000    | Principal Investigator    | Submitted |

### Core Professional Skills

- Digital Image Processing
- Interactive Teaching
- Curriculum Planning and Review
- Academic Leadership
- Student Mentoring and Supervision
- Online Teaching Tools
- Innovative Teaching Methodologies
- Academic Accreditation Activities
- Research and Technical Paper Review

- Examination and Assessment Coordination

### Contact Details

| Particular  | Details                                            |
|-------------|----------------------------------------------------|
| Email       | psna.sam@gmail.com                                 |
| Designation | Assistant Professor                                |
| Department  | Electronics and Communication Engineering          |
| Institution | RajaRajeswari College of Engineering,<br>Bengaluru |