Faculty Profile

Brief Profile:

I am an engineering faculty member with over 20 years of experience in teaching and mentoring students in the field of Electronics and Communication Engineering. With a deep-rooted passion for teaching, I strive to make complex technical concepts accessible and engaging through real-world analogies, hands-on activities, and interactive discussions. My commitment to academic excellence and student-centric learning has consistently driven me to innovate my teaching methodologies, ensuring that learners not only understand the subject matter but also develop a genuine interest and curiosity in the world of engineering.

Personal Information

- **Name:** Dr. Sujata D Badiger
- **Designation:** Assistant Professor (Selection Grade)
- **Department:** Electronics & Communication Engineering
- **Email:** sujathadb@rvce.edu.in
- **Phone:** 080-68188179

Google Scholar / ResearchGate / LinkedIn: [Link if applicable]/ **ORCID: [Link]**

Domain of Expertise

Research Focus

- **Primary Area:** Computer Networks, Wireless Networks, AI/ML
- **Allied Areas:**
    - Autonomous Vehicles
    - Edge Computing in Connected Cars
    - AI ML in Firmware Updates in Connected Cars
    - Wireless Sensor Networks

Academic Qualifications

- **Ph.D.**: [Electrical & Electronics Engineering Sciences], [VTU], [2021] *(Title: Multimodal Sensor Fusion for Target Classification)*
- **M.Sc./M.Tech**: [Information & Communication Systems], [VTU], [2005]
- **B.E./B.Tech**: [Instrumentation Engineering], [KUD], [1999]

Professional Experience

Experience

S.No	Institute/College/Industry	Job Title	Duration (From- To)
1.	RV College of Engineering	Assistant Professor	Aug 2005 to Till Date

Publications & Patents

Journal Publications

1. Sujata D B, Revanesh M, "Review on Smart and Flexible Parallel Concatenated Turbo Codes for Wireless Sensor Networks", International Journal of Engineering Research and Development 1 (4), 53-63, [2012].
2. Badiger, S.D., Uttarakumari, M., "Tree copula theory based fusion and compressive sensing for activity detection using multi-modal data," *International Journal of Innovative Technology and Exploring Engineering, 2019, 8(11), pp. 4152–4158* .
3. Sujata D B, Abhilash N, "YUV422 to YUV420 Color Space Conversion on FPGA", Journals of Research and Applications: Embedded System. Volume 03 Issue 02 Year 2020
4. Sujata D B, Grreshmanth N, "Review Report on Characterization of Integrated Circuits", Journals of Advancement in Electronics Design. Volume 03 Issue 02 Year 2020
5. Sujata D B, Mythili M, "A Review Report on Multi-Voltage Rule Check and Formal Verification of ASIC Design", Journal of VLSI Design and its Advancement. Volume 03 Issue 02 Year 2020
6. Mrs. Sujatha B, Dr. M. Uttrakumari "Vahicle Classification Based on Acoustic Signals using Machine Learning Algorithms", Science Technology and Development Journal, Volume VIII, Issue X, October 2019

Conference Papers

1. Mandadi, A.S., Gooty, S.A., Kumari, M.U., Badiger, S.D ,"Copula Based Moving Vehicle Classification in Compressive Domain without Signal Reconstruction"10th International Conference on Computing, Communication and Networking Technologies, ICCCNT 2019, 2019
2. Khened, P.A., Badiger, S.D. "Power integrity analysis for solid state drive PCB", Proceedings of IEEE International Conference on Emerging Technological Trends in Computing, Communications and Electrical Engineering, ICETT 2016
3. Sujata D B, M Uttarakumari,"Implementation of Vehicle Classification System on OMAP L138 DSP Processor" International Conference on New trends in Engineering & Technology 2018
4. Sujata D Badiger, Dr. Uttarakumari M., Sindhu "Target Classification and Tracking Using Symbolic Dynamic Filtering", 9th International Conference on Computing, Communication and Networking, 2018
5. Sujatha B, Dr. M. Uttrakumari, Mayank Murty, Rohan Bansal, "Identification of Objects using Data Fusion of LiDAR and Hyperspectral Data", International Conference on Innovations in Electrical , Electronics & Communication Engineering, 2018
6. Sujatha B, Manish K, Rahul A, Nikesh M, "Vahicle Classification Based on Acoustic Signals using Machine Learning Algorithm NDS" 6th National Conference on Communication, Information Technology and Electronics 2018
7. Sujata D Badiger, Lalith A, Raina Shah, Raveena Shah "Footstep Detection using Laplacian Distribution", International Conference on Energy, Communication, Data Analytics and Soft Computing (ICECDS 2017)

8. Sujata D Badiger, Dr. Uttarakumari M "Vehicle Classification Using Compressive Sensing",., IEEE International Conference on Recent Trends in Electronics, Information & Communication Technology(RTEICT-2017)
9. Sujata D. Badiger, Prasenjth Ray "Design and Implementation of reliable and Energy Efficient Routing Algorithm for WSN"., National Conference on Research Challenges in Power,Control, Communication and Instrumentation Leading to Sustainable Technologies[NCPCCI-15]
10. Sujata DB, Revanesh M "Review on Smart and Flexible Parallel Concatenated Turbo Codes for Wireless Sensor Networks". International Conference on Computing and Communication Technology, 2012
11. Kumar, N., Gupta, D., Badiger, S.D "Development of GNSS Test Tool and Automatic Suit". CSITSS 2019 - 2019 4th International Conference on Computational Systems and Information Technology for Sustainable Solution, Proceedings, 2019
12. Mrs. Sujatha B, Dr. M. Uttrakumari "Vahicle Classification Based on Acoustic Signals using Machine Learning Algorithm" 6th National Conference on Communication, Information Technology and Electronics 10-11th Apr 2018, KCT, Coimbatore

R & Grants & Consultancy Projects

Ongoing & Completed Research Projects

Completed Research Projects:

- **DESIGN, DEVELOPMENT, AND IMPLEMENTATION OF AN ADAPTABLE GROUND VEHICLE CLASSIFICATION SYSTEM FOR BATTLEFIELD SURVEILLANCE** – Funding Agency: ARDE, Duration: [2017 to 2019], Role: Co-PI.
- **DEVELOPMENT OF CLASSIFIER BASED ON DEEP/ MACHINE LEARNING ALGORITHMS FOR LAND BASED MUNITIONS"** – Funding Agency: ARDE, Duration: Dec 2019 to 2021, Role: Co-PI.

Awards & Recognitions

- "Cerificate of Excellence" for the mentored the worklet "OBFUSCATING CORE BLOCK OF ML MODEL" for Samsung PRISM
- Mentored Samsung PRISM work-let titled "OBFUSCATING CORE BLOCK OF ML MODEL", 2nd Runner up in the competition PRISMGlanz 2020
- "Cerificate of Excellence" for the mentored worklet "Bixby Analytics" for Samsung PRISM

Student Supervision

- **M.Tech/M.Sc. Students:** 15
- **Undergraduate Research Mentees:** 40

Teaching

Core Courses:

- EC363IA-Computer Networks and Protocols

Advanced/Lab Courses:

- EC363IA – LAB: Computer Networks and Protocols

Professional Roles

Responsibilities

- **Academic:** PG Project Coordinator, Dept NBA Coordinator]

External Connect