


**SRI SAIRAM ENGINEERING COLLEGE**

**DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING**

1. Name : <b>Dr. K. PRATHIBANANDHI</b>  <a href="mailto:prathibanandhi.eee@sairam.edu.in">prathibanandhi.eee@sairam.edu.in</a>	
2. Designation:	Associate Professor
3. Qualification :	M.Tech., Ph.D.,
4. Area of Specialization :	ELECTRICAL ENGINEERING
5. Experience :	Teaching- 3 Years Research- 3 years 10 months
6. No. of workshop : FDP attended :	No. of workshops attended : 7 No. of FDP/STTP attended : 21
7. Publication :	<b>Journal</b> National : 05 International : 08 <b>Conference</b> National : - International : 12
8. Staff Achievements:	To be a eminent in teaching, successful in research by providing value addition to the course through my structured learning, academic skills and analytical skills.

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## **Professional Experience: 6 Years**

### **Total Teaching Experience: 3 years**

- Associate Professor in Sri Sai Ram Engineering College from 1.10.2022 to till date
- Assistant Professor in Sri Sai Ram Engineering College from 02.08.2021 to 30.09.2022
- Assistant Professor in Saveetha School of Engineering from 14.02.2020 to 11.11.2020
- Full Time Research Scholar – College of Engineering from January 2016 – November 2019

## **Areas of Interest**

- Power Electronics
- Microprocessor and Microcontroller
- Embedded systems
- Power Electronics for Renewable Energy Systems
- Wind Energy Conversion Systems
- Power Quality
- Microcontroller Based System Design
- Design of Electrical machines

## **Research Title**

**“Torque Ripple Minimization and Speed Control of BLDC Motor with Various Hybrid Control Techniques”. – July 2021 ANNA UNIVERSITY**

## Society Membership

1. IEEE member - 92902238

## PUBLICATIONS

1. **K. Prathibanandhi**, R. Ramesh and C. Yaashuwanth "Dynamic Analysis of Brushless DC Motor Using Enhanced Fopid Controller With ALO Algorithm" Intelligent Automation & Soft Computing, ,Vol.34, no.1,2022.
2. Chithra.V,Jeyashri.R, Deepashri.R,**Prathibanandhi.K**,Priya.C, " Smart Sprinkler System Using Raspberry Pi" International Conference on Communication, Computing and Internet of Things, IC3IoT - PROCEEDINGS, 2022 (Scopus Indexed)
3. **K. Prathibanandhi** , C. Yaashuwanth & A. Raja Basha Improved Torque Performance in BLDC-Motor-Drive Through Jaya Optimization Implemented On Xilinx Platform, Microprocessor and Microsystems, (2021) (**ELSEVIER**), (**SCI INDEXED**)
4. **K. Prathibanandhi**, R. Ramesh, C. Yaashuwanth & A. Raja Basha Brushless Direct Current Motor With MV-PID Controller Management System Based On Arm Microcontroller, Circuit World.(2021)
5. S. Ramesh, C. Yaashuwanth, **K. Prathibanandhi**, A. Raja Basha & Jaishankar, "An Optimized Deep Neural Network Based Dos Attack Detection In Wireless Video Sensor Network", Journal Of Ambient Intelligence And Humanized Computing. (2021), (**SPRINGER**), (**SCI INDEXED**).
6. Jegajothi, C. Yaashuwanth & **K. Prathibanandhi**, A Centralized Embedded Controller For Maximum Power Point Tracking In Solar Photo Voltaic System Under Fluctuating Irradiance Condition, Microprocessors and Microsystems, (2021) (**ELSEVIER**), (**SCI INDEXED**),
7. Ramesh S, Yaashuwanth C, **Prathibanandhi K**. Design of optimized compressed sensing routing protocol for wireless multimedia sensor networks. Int J Commun Syst. 2021;e4887. <https://doi.org/10.1002/dac.4887>

8. **Prathibanandhi. K** & Ramesh. R “Hybrid Technique in MRPID Controller for regulating Torque and Speed of BLDCM Drive System”, Journal of Electrical Engineering, vol. 20, no. 1, pp. 385-404, 2020
9. **Prathibanandhi. K** & Yaashuwanth. C “A Novel Gravitational Search Approach with the Optimum Static Synchronous Compensator Focus Detection to Reduce Power Loss”, Journal of Xi'an University of Architecture & Technology.2020. (SCOPUS)
10. M. Sujith, S. Madhubalan & **K. Prathibanandhi**, “Implification of ANN-FLC Based PI Controller for Dual Interfacing Converters”, Journal of Green Engineering.2020. (SCOPUS)
11. S. Ramesh, C. Yaashuwanth, **K. Prathibanandhi**, A. Raja Basha & S. Dhivya “An Optimization Algorithm to Improve Lifetime of Wireless Video Sensor Network Over the Secure Transmission Link with Enhanced Security Feature”, Solid State Technology, 2020, (SCOPUS)
12. Jegajothi, C. Yaashuwanth & **K. Prathibanandhi**, Generation of Maximum Possible Power in Solar PV system utilizing modified HMFA based ANNANN Controller based on HMFA, Solid State Technology, 2020, (SCOPUS)
13. **Prathibanandhi. K** & Ramesh. R “Hybrid control technique for minimizing the torque ripple of brushless direct current motor”, Measurement and Control, vol. 51, no. 7-8, pp. 321-335, 2018 (SCI INDEX)
14. R. Senthilkumar, K. Premkumar & **K. Prathibanandhi**, “Fault Diagnosis Of Induction Motor Using Vector Control Technique”, International Journal of Scientific & Engineering Research, Volume 5, Issue 4, April-2014

### **International Conference**

1. S. Ramesh & **Prathibanandhi. K** “A Conjoint Edifice for Qos and QoE through Video Transmission at Wireless Multimedia Sensor Networks” International Conference on Innovation Data Communication Technologies and Application on March 2019.
2. **Prathibanandhi. K** “Implementation of Switched Inductor Z-Inverters FED Induction Motor” International Conference on Electrical, Communication & computing on March 2014.
3. **Prathibanandhi.K** “ AUGMENTED REALITY-BASED RESTAURANTS” IEEE International Conference on Power, Energy, Control and Transmission Systems on December 2022

4. **Prathibanandhi.K** “ Hand Gesture Controlled Wheelchair” IEEE International Conference on Power, Energy, Control and Transmission Systems on December 2022
5. **Prathibanandhi.K** “ An Intelligent Saviour System For Improved Security Using Facial Recognition” IEEE International Conference on Power, Energy, Control and Transmission Systems on December 2022
6. **Prathibanandhi.K** “ Aegis Surtot” IEEE International Conference on Power, Energy, Control and Transmission Systems on December 2022
7. **Prathibanandhi.K** “ Design and Implementation of Electric Cycle” IEEE International Conference on Power, Energy, Control and Transmission Systems on December 2022
8. **Prathibanandhi.K** “Blink to speak an Assistive Device for Paralyzed People” IEEE International Conference on Power, Energy, Control and Transmission Systems on December 2022
9. **Prathibanandhi.K** “ GSM Based Power Meter Billing with Load Control” IEEE International Conference on Power, Energy, Control and Transmission Systems on December 2022
10. **Prathibanandhi.K** “Smart Energy Meter with Cloud Connectivity” IEEE International Conference on Power, Energy, Control and Transmission Systems on December 2022
11. **Prathibanandhi.K** “ An Astute Rescue System for Enhanced Security using Facial Recognition” IEEE International Conference on Power, Energy, Control and Transmission Systems on December 2022
12. **Prathibanandhi.K** “ Design and Development of PV Powered Intergraded DC - DC Converter Fed Multilevel Inverter for Standalone Application” ESTCON 2022 in Malaysia on December 2022

### **Seminar & Training attended**

1. Attended a workshop on “Computational intelligence theories, applications and future directions” BY IEEE computational Intelligence society in 2013.
2. Attended an Author workshop by Wiley in November 2018.
3. Attended an Author workshop by Elsevier in September 2019.
4. Attended Three Days Online Workshop on “Data Science and Machine Learning” in Sri Venkateswara College of Engineering. 2020

5. International Webinar Series on “The New Normal : Automotive Industry Short-Term Survival” in Sri Venkateswara College of Engineering. 2020
6. International Webinar Series on “Recent Trends in Power Quality Improvement using AC/AC Converters” in Sri Venkateswara College of Engineering. 2020
7. Attended Webinar on “Intellectual Property Rights” Organized by Research and Development Centre, Krishnasamy College of Engineering & Technology, Cuddalore, 2021
8. Attended FDP on Electrical & Electronic Systems for wind & solar Organized by NITTTR Chennai.
9. Completed successfully AICTE Training and Learning (ATAL) Academy Online Elementary FDP on "Electric Vehicles: Challenges and Opportunities in Future India" Organized by RMK college of engineering and technology.2021
10. Attended FDP on Recent Trends in Energy & Power Systems Organized by the school of Electrical Engineering , Vellore Institute of Technology Chennai
11. Faculty Development Programme on RENEWABLE ENERGY SYSTEMS Organized by Jerusalem College of Engineering.
12. Attended Webinar on “Research Skill Development Programme” Organized by Research and Development Centre, Krishnasamy College of Engineering & Technology, Cuddalore, 2021
13. Attended Faculty Development Programme on RESEARCH CHALLENGES IN ELECTRICAL ENGINEERING AND THE SOLUTION WITH SOFTWARE Organized by Sri Sairam Engineering College 2021
14. Completed successfully AICTE Training and Learning (ATAL) Academy Online Elementary FDP on "Smart Grid – Drivers, Challenges and Opportunities" from 04/01/2022 to 08/01/2022 at SASTRA DEEMED TO BE UNIVERSITY
15. Attended Faculty Development Programme on "AI Applications to Power Systems" during 17- 22 January 2022, organised by Department of Electrical & Electronics Engineering, Siddaganga Institute of Technology, Tumakuru.
16. Participated in the Quiz on the “The great Indian Women Leaders” conducted by the Department of Electrical and Electronics in association with IEEE WIE affinity group on 26<sup>th</sup> January 2022 and scored 100 percent in Sai Ram Engineering College.
17. Completed successfully NPTEL Course completed in Introduction To Industry 4.0 And Industrial Internet Of Things- 2022

18. Attended Six Day FDTP ON EE8591- DIGITAL SIGNAL PROCESSING
19. Attended IEI all india seminar on Applications of Artificial intelligence and machine learning in electrical engineering conducted by SEC-EEE .
20. Attended AICTE Recognized Faculty Development Programme on MATLAB and SIMULINK basics for Hardware Projects conducted by NITTTR Chandigarh.
21. Attended ATAL Hybrid FDP on " Power Electronics Applications to Renewable Energy systems, Electric Vehicles and intelligent control" from 10.10.22 to 21.10.22 at Sri Sai Ram Institute of Technology
22. Participated in Naan Mudhalvan Train the trainers program for Augmented Reality, Virtual Reality & Metaverse Development held between 19-22 of Sept, 2022
23. Completed NPTEL Course on " Intellectual Property Rights and Competition Law
24. Attended Webinar on "IoT Design Methodologies"
25. AICTE Recognized Faculty Development Programme on Power Electronics for Renewable Energy Application Conducted by NITTTR Chandigarh
26. Completed IEEE Learning Network Courses
27. Attended Six Day FDP ON “Future Generation Communication and Networking” – Conducted by Jerusalem College of Engineering – 2.1.2023 – 7.1.2023
28. Attended Six Day FDP ON “ELECTRIC VEHICLE DRIVE SYSTEM” Conducted by Jerusalem College of Engineering – 27.02.2023-04.03.2023

### **Industrial Training attended**

1. Undergone 6 days industrial training program at I.P.L Transformers Pvt.Ltd Chennai from 02.03.2022 to 08.03.2022.

### **Outside world-Programs**

1. Reviewer in International Journal of Applied Power Engineering
2. Reviewer in International Journal of Photoenergy

### **Other Activities**

- Guiding Students Projects (internal and external).
- Class Coordinator for 2025 Batch students

- Actively involved in all Departmental Activities like Technical Symposium, Industrial Visit, Educational Tours, Workshops and Seminars
- Department Website Coordinator
- Department News Letter Coordinator
- Member in NBA Criteria 3
- Scope member in NAAC 5 criteria
- Scope member in Jal Sakthi Project

**PATENT:**

S.NO	TITLE	APPLICATION.NO	STATUS
1.	A Convection Turbine Renewable Energy Converter	347926-001	<b>Granted</b>
2.	A System and Method for Thermal Management in Automotive Seats Using Solar Energy.	202041030938	<b>Granted</b>
3.	Portable solar water heater	331189-001	<b>(First Evaluation Report Received)</b>
4.	Enhancing Security for Vehicle Tracking System	202041000449	<b>Filed</b>
5.	Design Application	365756-001	<b>(Examination Report Generated)</b>
6.	Design Application	365756-001	<b>Filed</b>
7.	Design Application	369500-001	<b>Filed</b>

**BOOK CHAPTERS**

1. “A conjoint edifice for QOS and QOE through video transmission at wireless multimedia sensor networks” lecture notes on Data Engineering and Communication Technology Vol 46
2. Ramesh S, **Prathibanandhi K**, Hemalatha P, Yaashuwanth C and Adam Raja Basha A “The Convergence of Novel Deep Learning Approaches in Cybersecurity and Digital Forensics” Chapter 8 Simulation and analysis of mathematical methods in Real Time Engineering Applications Scrinever publishing wiley pp 164-189



3. Python Programming Jupiter publications Book authored, Jupiter Publications.
4. “Combination BFPSO Tuned Intelligent Controller for Maximum Power Point Tracking in Solar Photovoltaic Farm Interconnected to Grid Supply” Lecture Notes in Electrical Engineering. 2022

### **PROJECT GRANTED**

1. Design and Development of Enhanced Secured Video Communication System for Video Sensor Network - **ISRO INDIAN SPACE RESEARCH ORGANIZATION HQ DEPARTMENT OF SPACE**
2. Tamilnadu State Council of Science and Technology – STP for Rs.7500