


**Sri Sai Ram Engineering College**  
**Department of Electronics and Instrumentation Engineering**  
**STAFF PROFILE**

<b>Name:</b> Mr. K.MADHANA MOHAN	
<b>Designation:</b>	Assistant Professor Grade-III
<b>Qualification:</b>	M.E, (Ph.D)
<b>Area of Specialization:</b>	ATTITUDE CONTROL OF CUBESAT
<b>Experience:</b>	Teaching- 14 yrs& 6 Months
	Industry/Polytechnic: NA
<b>Number of Workshops/ Conferences/ FDP Attended:</b>	WORSHOPS-1 0  FDP-12
<b>Publication:</b>	Journal  National: 2  International: 5  Patent:3
	Conference:  National: 03  International: 08
<b>Research Guidance:</b>	Guided 15 UG projects till date

General:	Active member of IEEE, ISOI and ISTE
Staff Achievement	Have won Cash awards for producing 100% results 8 times

### Experience:

S. No	Name of the Institution	Designation	Department	Period of Experience
1.	Sri Sairam Engineering College, West Tambaram, Chennai	Assistant Professor.	Electronics and Instrumentation Engg	13yrs, 6 months (June 2010 –Present date)
2.	Rajarajeswari Engineering college, Adyalampattu, Chennai-600095	Lecturer.	Electronics and Instrumentation Engg	11 Months (July 2009-May2010)

### Software proficiency:

- ☐ Control system toolbox in MATLAB
- ☐ CUBESAT library in MATLAB.
- ☐ General Mission Analysis Tool-GMAT for Satellite mission analysis.

### Research work:

- ☐ Working on implementation of Control algorithm for Attitude control of CUBESAT.
- ☐ Working on analysis of kinematics of attitude representation of Satellite using GMAT software.

### Institution responsibility:

- ☐ Timetable and Industrial visit coordinator of my Department
- ☐ MOU and IPR coordinator of my Department
- ☐ Part of NBA ,NAAC and ISO audit process concerning to my department responsibilities.
- ☐ One of the coordinator of IEEE AESS CHAPTER.

**Theory Subjects Handled:**

- Process control
- Control Systems
- Transducer Engineering
- Electrical Measurements
- Analytical Instruments.
- Computer control of process.
- Industrial Instrumentation-II
- Industrial Instrumentation.
- Logic and Distributed control system.
- Power plant Instrumentation.

**UG projects Guided:**

S. No	Title of the Project	Period of Guidance
1.	Engine Oil Condition Monitoring using IoT and Predictive Analysis	February 2020 to April 2020
2.	Solar energy based automated water distribution with leakage detection using PLC and SCADA.	February 2019 to April 2019
3.	Accident prevention by monitoring and control of vehicle tyre pressure using wear & tear and pressure sensor	February 2018 to April 2018
4.	Economic and efficient prevention of soiling in solar panel	February 2018 to April 2018
5.	Mini turbine powered Railway system	February 2017 to April 2017
6.	Automated light intensity modulation and traffic light signaling for blinded person.	February 2016 to April 2016
7.	Efficient binary adder using Quantum Dot –cellular automata.	February 2015 to April 2015
8.	Bearing condition monitoring using Neural network.	February 2014 to April 2014
9.	Interfacing and analysis of MISO system using PLC.	February 2014 to April 2014
10.	Automated safety system in Railways	February 2013 to April 2013

**Workshops Attended:**

- **Attended one day National Workshop on “Robotics and Industrial application”, sponsored by IET (UK) YPS, at Dr. MGR Educational and Research institute, Chennai on 4.2.2011 ,**
- **Attended two days Workshop on “Industrial Automaton” organized by Department of Electronics and Instrumentation Engineering in association with prolific System on 6&7.9.2011.**
- **Attended two days CSIR sponsored National Workshop on “Intelligent modeling and control using MATLAB and LABVIEW” organized by Department of Electronics & Instrumentation Engineering held at Easwari Engineering college between 25.8.11 and 27.8.11.**
- **Participated in a two day workshop on “Modern PID Controllers and their capabilities” organised by isa South India section, Chennai at CPCL RESOT, Chennai on 13&14.12.11.**
- **Participated in a two day workshop on ‘Industrial IOT’” organized by Department of Electronics & communication Engineering held at Crescent University on 6<sup>th</sup> and 7<sup>th</sup> april 2018.**
- **Attended a three day Workshop on “Process automation using MATLAB” organized by Department of Electronics & Instrumentation Engineering held at Sri Sairam Engineering college between 23.07.18 and 25.07.18.**
- **Attended a two day Workshop on “Application of power electronic converters in solar photo voltaic systems- MATLAB hands on” organized by School of Electrical Engineering held at Vellore Institute of Technology on 28<sup>th</sup> and 29<sup>th</sup> 2018.**
- **Attended a five day Workshop on “patent searching, drafting and filing” (online mode) from 29-05-2020 to 02-06-2020 In Association with Turnip Innovations and Exilyze Intellectual Services ,IEEE computer society & computer society of india.**

#### **FDPs/SDPs Attended:**

- **Attended Faculty Development training programme on “Advanced control system” organized by centre for faculty development at Madras institute of technology between 25.5.15 & 31.5.15.**
- **Attended Faculty Development training programme on “Entrepreneurship career development program” at Sri Sairam Institute of Management studies from 8.04.2019 to 12.04.2019.**
- **Attended a three day Faculty Development training programme at Teaching Learning Centre, IIT Madras from 12.01.2019 to 14.01.2019.**
- **Participated in the one week Online AICTE Recognized Faculty Development Programme on Neural Networks and CNN from 11-05-20 to 15-05-20 Organized by NITTTR, Chandigarh.**

- **Attended a five day Faculty Development training program on ‘Industrial automation using PLC/SCADA with IoT organized by the School of Electrical Engineering, VIT Chennai from 21.09.2020 to 25.09.2020.**
- **Attended a five day AICTE Training And Learning (ATAL) Academy Online FDP on "Control Systems & Sensors Technology" from 17.10.2020 to 21.10.2020 at Madan Mohan Malaviya University of Technology Gorakhpur.**

**Patent Publications:**

1. **Published a patent titled’ smart driver guidance system for indian roads’, with Publication Date being 10/07/2020 and Application No.202041028100 A.**
2. **Published a patent titled ‘Automated safety system for driver and pillion rider in two wheeler’. With Publication Date being 09/10/2020 and Application No.202041043044.**
3. **Design Patent no 350625-001 granted for ‘A Smart watch stand’ on 04/10/2021**

### National Conference :

S. No	Title of the paper	Conference Details	Month/Year of publication
1.	Remote surveillance and control by web enhanced mobile phone.	National Conference on Communication and Informatics (NCCI 2009) at Sri venkateswaras College of Engg, ,Sriperumbdur.	May 2009
2.	Modeling and control of MISO system.	National Conference on Electrical system(NCES 2014) at Indira institute of Engineering and technology, Tiuvallur.	March. 2014
3	Automatic Bicycle for physically challenged.	National Conference on recent advancements in signal processing and communication (NCRASPC-2019) at R.M.K College of Engineering and Technology	February,2019.

### International Conference :

S. No	Title of the paper	Conference Details	Month/Year of publication
1	Economic and efficient prevention of soiling in solar panel	Second international conference on 'Power electronics and renewable energy systems' organized by the Department of Electrical and Electronics Engineering, Rajalakshmi Engineering College, Chennai.	April, 2018.
2	Accident prevention by monitoring and control of vehicle tyre pressure using wear & tear and pressure sensor	international conference on 'Photonics and high speed optical networks' ,organized by the Department of Electronics and Communication Engineering,S.A Engineering College.	April, 2018.
3	Solar energy based automated water distribution with leakage detection using PLC and SCADA.	Seventh international conference on 'Contemporary Engineering and Technology 2019', organized by OSIET,Prince Shri VenkateshwaraPadmavathy Engineering College.	March. 2019.
4	Engine Oil Condition Monitoring using IoT and Predictive Analysis	International e-Conference on Green Technologies for Power Generation,Communication and Health Care ,6th June,2020	6th June,2020

		held at St.Peter's Institute of Higher Education and Research , Avadi,Chennai-600054,India.	
5	A Drowsiness Detection Using Smart Sensors during Driving and Smart Message Alert System to Avoid Accidents	The First International Conference on Advances in Computational Science and Engineering AIP Conf. Proc. 2519, 040015-1–040015-6; <a href="https://doi.org/10.1063/5.0112049">https://doi.org/10.1063/5.0112049</a> Published by AIP Publishing. 978-0-7354-4204-7/\$30.00	03 October 2022
6	IoT based monitoring and controlling of pressure process station	The First International Conference on Advances in Computational Science and Engineering AIP Conf. Proc. 2519, 050065-1–050065-10; <a href="https://doi.org/10.1063/5.0110271">https://doi.org/10.1063/5.0110271</a> Published by AIP Publishing. 978-0-7354-4204-7/\$30.00	03 October 2022
7	Space vector modulation techniques based speed control of induction motor using DTC	The First International Conference on Advances in Computational Science and Engineering AIP Conf. Proc. 2519, 050064-1–050064-8; <a href="https://doi.org/10.1063/5.0109999">https://doi.org/10.1063/5.0109999</a> Published by AIP Publishing. 978-0-7354-4204-7/\$30.00	03 October 2022
8	CubeSat attitude control by implementation of PID controller using python	12th International Conference on Advanced Computing (ICoAC)	19th August 2023

### Journal Publications:

1. Published a paper titled' Economic and efficient prevention of soiling in solar panel', in the International Journal of Pure and Applied Mathematics, Volume 118,No. 24,2018,ISSN-1314-3305.
2. Published a paper titled' Automatic bicycle for physically challenged',in the Journal of Applied Science and Computations, ISSN NO: 1076-5131, Volume VI, Issue V, May/2019.
3. Published a paper titled' Accident prevention by monitoring and control of Vehicle tyre pressure using wear and tear pressure sensor',in the International Journal of recent Technology and Engineering (IJRTE), ISSN: 2277-3878,Volume-8Issue-2, July 2019. (Scopus Indexed)
4. Published a paper titled' Smart Dustbin',in the International Journal of Engineering and advanced Technology (IJEAT),ISSN: 2249 –8958, Volume-8, Issue-6, August 2019.(Scopus Indexed)
5. Published a paper titled “Automated safety system for driver and pillion rider in two wheelers “- ISBN:978-93-5391-188-1 in the proceedings of the IXth PIC 2020 held at KIIT,Bhubaneswar, Odisha

- 6. Published a paper titled' Automated Safety System For Driver And Pillion Rider In Two Wheeler',in the Studies in Indian Place Names-UGC care Journal, ISSN: 2394-3114, Vol 40 issue 3 (s1) February 2020.**
- 7. Published a paper titled "Engine Oil Condition Monitoring using IoT and Predictive Analysis", in the journal of critical reviews ISSN- 2394-5125 vol 7, issue 04, 2020.**

#### **Project Proposal and Awards;**

**1.Proposal for NRDC- DEMONSTRATING INNOVATIVE PROTOTYPES FOR START-UPS AWARDS – 2020 has been shortlisted under the title “ Automated safety system for driver and pillion rider in two wheeler”.**

**2.Submitted a proposal under the title “ IoT based engine oil condition monitoring system” for funding through TNSCST in the period January,2021.**



