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

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| **Name:** **Mr. K.MADHANA MOHAN** | |
| Designation: | Assistant Professor Grade-III |
| Qualification: | M.E, (Ph.D) |
| Area of Specialization: | ATTITUDE CONTROL OF CUBESAT |
| Experience: | Teaching- 14 yrs& 6 Months |
| | Industry/Polytechnic: NA |
| Number of Workshops/ Conferences/ FDP Attended: | WORSHOPS-10 <br> FDP-12 |
| Publication: | Journal <br><br> National: 2 <br><br> International: 5 <br><br> Patent:3 |
| | Conference: <br><br> National: 03 <br><br> International: 08 |
| Research Guidance: | Guided 15 UG projects till date |
| General: | Active member of IEEE, ISOI and ISTE |

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| Staff Achievement | Have won Cash awards for producing 100% results 8 times |

## Experience:

| S. No | Name of the Institution | Designation | Department | Period of Experienc |
|---|---|---|---|---|
| 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, | 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 nad 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
- ControlSystems
- TransducerEngineering
- 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 andtraffic light signaling for blinded person. | February 2016 to April 2016 |
| 7. | Efficient binary adder using Qantum 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 6th and 7thapril 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$^{th}$ and 29$^{th}$ 2018.**

- **Attended a five day Workshop on"patentsearching, drafting and filing" (online mode) from 29-05-2020 to 02-06-2020 In Association withTurnip Innovations and Exilyze Intellectual Services ,IEEE computer society & computer society ofindia.**

**FDPs/SDPs Attended:**

- **Attended Faculty Development training programmeon "Advanced control system"organized by centre for faculty development at Madras institute of technologybetween 25.5.15 &31.5.15.**

- **Attended Faculty Development training programmeon "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 programmeat Teaching Learning Centre,IIT Madras from 12.01.2019 to 14.01.2019.**

- **Participated in the one week Online AICTE Recognized Faculty Development Programmeon Neural Networks and CNNfrom11-05-20 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 |
|---|---|---|---|
| 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 held at St.Peter's Institute of Higher Education and Research , Avadi,Chennai-600054,India. | 6th June,2020 |

| 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; https://doi.org/10.1063/5.0112049 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; https://doi.org/10.1063/5.0110271 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; https://doi.org/10.1063/5.0109999 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 au gust 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.(Scopos 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.**