

SRI SAI RAM INSTITUTE OF TECHNOLOGY



Name of the College : Sri Sai Ram Institute of Technology
Name of the Department : Electronics and Communication Engineering
Name of the Degree/Course : B.E/ECE
Name of the faculty member : Dr.Gomalavalli R
Regular or Adjunct : Regular
Present Designation : Associate Professor
Residential Address : No.23 Thiruvalluvar nagar Gummidipoondi-601201.
Contact Nos. : Mobile:9940012972
Email : gomalavalli.ece@sairamit.edu.in
Gender : Female
Community : MBC

Date of Birth and Age : 05/01/1978 & 46
Date of joining the present : 05.07.2024

I. Particulars of Educational Qualification: (only completed)

Category	Name of the Degree	Specialization	Year of Passing	Name of the College	Name of the University	% of Marks /Grades obtained	Class obtained
UG	B.E	ECE	1999	St .Peters Engineering College	Madras University	73	First Class
PG	M.E	Medical Electronics	2010	College of Engineering, Guindy campus	Anna University	8CGPA	First Class
Ph.D.	Ph.D	Medical Image Processing	2020	College of Engineering, Guindy campus	Anna University	8CGPA	First Class

II. Title of Ph.D. Thesis* : CT RENAL TUMOUR SEGMENTATION USING IMAGE PROCESSING

III. Faculty in which Ph.D. was awarded :Information and Communication

IV. Academic Experience:

Name of the College	Designation	Joining Date	Relieving Date	Experience		
				Years	Months	Days
Sri Sai Ram Institute of Technology	Associate Professor	05.07.2024	Till Date		9	9
Siddharth Institute of Engineering & Technology	Associate Professor	01.06.2020	31.06.2024	3	8	
Priyadarshini Engineering College	Associate Professor	01.06.2019	30.05.2020	1		
College of Engineering, Guindy campus	FULL TIME Research Scholar	01.06.2014	30.05.2019	5		
Jerusalem College Of Engineering	Assistant Professor	01.05.2010	30.06.2014	4		
Total						

V. Industrial Experience:

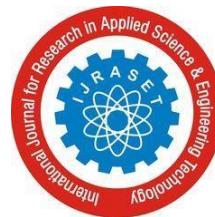
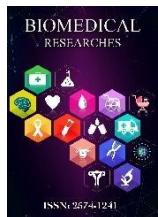
Name of the Organisation	Designation	Joining Date	Relieving Date	Experience		
				Years	Months	Days
Kappa Electricals, Velacherry	Testing Engineer	Sep 2003	May 2004	1		
Sri Gayatri Power systems, Secunderabad	Testing Engineer	June 2000	July 2003	1		
Instruments and Measurements Pvt Ltd, Chennai	Testing Engineer	June 1999	May 2000	1		

Research Area

Neural Network, Electronic Devices and Circuits, Integrated Circuits, TLW etc.,

Soft computing techniques, Digital Electronics, Signals and Systems. Image Processing, Communication system etc.,

Author / Editor / Reviewer (Journals)



PROPOSALS SUBMITTED

Dr. R Gomalavalli, Principal Investigator has submitted Project Proposal On "Animal sound classification to Monitor and diagnose its health conditions" Submitted to Division SEED Programme or Scheme: Strengthening Up scaling and Nurturing Local Innovations for Livelihood (SUNIL) Programme on February 2023.

Dr. R Gomalavalli Co Principal Investigator Fuzzy coordinated PI controller based double Switch DC to DC converter for E-vehicle Generated on 24-02-2023 02:02:27 PM Reference No. : 182023000088 Saved Date: 02-Feb-2023 [SERB Qualified Unique Identification Document: SQUID-1988-LR-7718]

PATENT PUBLICATION

1. Title Of The Invention: Mobile Application Based IOT System For Overhead Water Tank Maintenance, Application No.202141046162 A 2021
2. Title Of The Invention: Electric Power Distribution Employing Ensemble Machine Learning Based Cyber-Physical System, Application No.202241006399 A 2021
3. Title Of The Invention: Machine Learning Based Heat Signature Signal Processing System Employing Radiometer Array, Application No. 202241008171. April 2022
4. Title Of The Invention: Temperature Sensing and Displaying Face Mask Casing, Design patent for Grant Application No. 369767-001. – August 2022
5. Title Of The Invention: Implementation of surveillance monitoring using ESP32-CAM Module Application No. 202241065882A - Nov 2022.
6. Title Of The Invention: Design And Implementation Of A Smart Network Using LORA for measuring environment parameters, Application No. 202241065883A- Nov 2022.
7. Title Of The Invention: Design And Android Chabot Application Using Artificial Intelligence System Application No. 202241065881A- 25th Nov 2022.

International Journals Published

2. R. Gomalavalli (2024), "Integrating Deep Learning into VLSI Technology: Challenges and Opportunities" E., Veera Boopathy, E., C., Sasikala, C., L., Vigneash, L., R., Gomalavalli, R., K., Rajeshwaran, K. International Research Journal of Multidisciplinary Scope, 2024.

3. R Gomalavalli (2024) "Efficient Power Management in Multicore Systems using Distributed On-Chip Switched-Capacitor Converters with DVFS" IEEE Conference 2024.
4. R Gomalavalli (2024) "Permittivity Measurement of Edible Food Materials: A Review Paper" has got published in Material science and Technology vol.3Issue No.01 .
5. R Gomalavalli (2024) "Hand Gesture System for Physically Challenged People" has got Published in International Journal of Scientific Research n Science and Technology Volume.11,Issue no.11. IMF =8.62.
6. R Gomalavalli (2023) "Clinical Application of Neural Network for Cancer Detection Application" has got Published in AIHC, Springer to Publish.
7. R Gomalavalli, (2022) "Comparison of Transient Responses of Two Switch forward converter with sliding mode controller and HC-Fuzzy controller." publication in GS Journal Volume 10, Issue 1.
8. K Kishore kanna , R Gomalavalli, C .priya, , P Sattheshlingam (2023) "Detection Of Mental Fatigue In Drivers Using EEG Applications "Journal of Data Acquisitionand processing, has got acceptance in the Year 2023.
9. R Gomalavalli, G Pavan, G Ramyasri, P Niranjan, R Naveen,K.Prathyusha (2022), Automatic Pothole Detection and Uploading Data to Cloud Servers,IOSR,ISSN: 2278-2834 Vol 17,Issue 02.
10. R.Gomalavalli , (2022), Quick analysis of Quality of Cereals,Oil seeds and
11. pulses using AI , IOSR,ISSN: 2278-2834 Vol 17,Issue 02.
12. R Gomalavalli , (2021),A High-Performance MAC Unit by Integrating Additions and Accumulations into PPR Process, , International journal of Innovative Research in science, Engineering and Technology in IJIRSET, Volume 10, Issue 7.
13. R. Gomalavalli, (2021),Design and Development of Agri-Bot for Seeding, Watering and Ploughing, International journal of Innovative Research in science, Engineering and Technology in IJIRSET, Volume 10, Issue 7.
14. .R. Gomalavalli, N. Kripa, Oinam Robita Chanu (2021) Modern Dehydration Detecting and Alerting System for Pregnant Women, International Journal of Aquatic Science ISSN: 2008-8019 Vol 12, Issue 03,pg no.53-57.
15. R. Gomalavalli, (2021),Object Detection Deep Learning International journal of Advances in Engineering and Management (IJAEM), Volume 3, Issue 7,PP: 2991-2994.
16. R. Kishore Kanna, N. Kripa, Dr R. Gomalavalli. (2021). Brain Tumour Detection & Classification Using Neural Network Algorithm Application. International Journal of Modern Agriculture, 10(2), 3046 - 3054.
17. R. Kishore Kanna, N. Kripa, Dr R. Gomalavalli. (2021). Advanced Precautionary & Smart
18. Alert System For Contagious Diseases Using Microcontroller Applications IJCRT Volume 9, Issue 3 March 2021 ISSN: 2320-2882/
19. R.KishoreKanna,N.Kripa,R.Gomalavalli(2021), Comparison of Electroencephalography Waveform Before and After Modified Therapy, Drugs and Cell Therapies in Hematology,(ISSN: 2281-4876) Volume 10 Issue 1, pg.no.1148-1152.
20. Gomalavalli R, BB Kishore,(2020)Low-cost Portable Heart Rate Monitoring Module ,(2021), Design Engineering, ISSN: 0011- 9342,Pg.no. 16807-16811.
21. Gomalavalli, R, Venkata Sai, PM, Sriram, K, Muttan, S (2018) Female Cancer Control Diagnosis by Decision Making using Image Processing - A Prospective Study", International Journal of Science and Research, vol. 7, Issue 1 (Scopus / Impact Factor 6.391).
22. Gomalavalli, R, Muttan, S, Venkatasai, PM, Sriram, K (2017) Feature extraction by gray level co-occurrence matrices parameters in computed tomography of renal cell carcinoma. International Journal of Applied Research in Science and Engineering Technology. (UGC Approved journal /Impact factor 6.887).
23. Gomalavalli, R, Sriram, K, Muttan, S, Venkatasai, PM (2017) Texture analysis of computed tomography images of kidney by active contour method: a novel method for assessment of primary solid renal mass heterogeneity - A prospective study. Journal of Clinical and Diagnostic Research (PubMed& Scopus).
24. Gomalavalli, R, Muttan, S, Venkatasai, PM, Sriram, K (2017) Feature Extraction of kidney Tumor implemented with Fuzzy Inference System", International journal of applied research in Science and Engineering Technology – (UGC Approved journal / Impact factor 6.887).
25. Gomalavalli, R, Muttan, S, Venkatasai, PM, Sriram, K (2017) Feature extraction of male renal cell malignant. Biomedical Research. (Scopus/ Impact factor).

26. Gomalavalli, R, Muttan, S, Venkatasai, PM (2016) Determination of dice coefficient of diseased renal images. IOSR Journal of Electronics and Communication Engineering, Vol.11, Issue 1, pp. 37-44. (Scopus/ Impact factor 3.2).
27. Gomalavalli, R, Muttan, S & Venkatasai, PM (2016) Boundary detection of renal using contour segmentation. International Journal of Biomedical Engineering and Technology. (Scopus / Impact Factor 2.1).
28. Gomalavalli, R, Muttan, S, Jagadeesan, SK, Chandrasekar, G (2012) Design and development of noninvasive method of functional Thyroidism classification. Journal of International Medical Science Academy. (Scopus/ Impact factor 1.6).

Book Chapters & Books Published :

1. Smart Detection and Removal of Artifacts in Cognitive Signals Using Biomedical Signal Intelligence Applications has published in IGI Global Publisher,DOI:10.4018/979-8-3693-1479-1.ch013.
2. Computational Cognitive Analysis for Intelligent Engineering Using EEG Applications ,RKanna, Gomalavalli R, Yamuna Devi, Ambikapathy A has published book chapter in Intelligent Engineering Applications and Applied Sciences for Sustainability, Year 2023. DOI:10.4018/979-8-3693-0044-2.ch017.
2. DIGITAL PRINCIPLES & SYSTEM DESIGN, Dr R Gomalavalli ,Dr K Yamuna Devi,J Hema has published book Year 2023,DOI:ISBN-13:978-93-5577-67-5.
3. Cognitive Analysis Of Eeg Waveforms Before And After Yoga Using Neuro Training Application, has published book chapter ,Year 2023 .DOI:ISSN:978-93-5906-582-3 .
4. Classification of Renal Tumor using Computed Tomography Images is submitted and got approval in ELIVA Press for Book Chapter Publishing in process.
5. Hybrid Deep Learning Of Cancer Detection has submitted for book chapter.

International Conference Presented

1. Gomalavalli R (2023) Smart plant Diseases prediction and prevention system at International Conference on Recent Advancements in Management and Engineering Research (ICRAME 2024)
2. Gomalavalli R (2023) Systematic Cognitive Computing Framework Application using Medical Information Processing in IEEE Conference (2023).
3. Gomalavalli R (2023) T1Weighted MR Images are used to Detect Brain Tumor Tissue Using A Hierarchical Centroid Shape Descriptor at IEEE International Conference- ICRTCCB 2023.
4. Gomalavalli R (2023) A Convolutional Neural Network and Image Processing are Used to Estimate the Age and Gender of Human Beings at IEEE International Conference- ICRTCCB 2023.
5. Gomalavalli R ,R Kishorekanna (2022) Computing Model for Alzheimer Prediction Using Support Vector Machine Classifier at IEEE International Conference on CCET at SAGE University.
6. Gomalavalli R ,R Kishorekanna (2022) Human computer Interface Application for Emotion detection using facial Recognition at IEEE International Conference on CCET at SAGE University.

7. Gomalavalli R ,R Kishorekanna (2022) Smart Electronic Arm Module using Arduino Applications at IEEE International Conference on CCET at SAGE University
8. Gomalavalli R ,R Kishorekanna (2022) Automatic Defective ECG SIGNAL Detection using Matlab Applications at IEEE International Conference on CCET at SAGE University.
9. Gomalavalli R ,R Kishorekanna (2022) Software Development Frame work for Cardiac Diseases prediction using Machine Learning Applications at IEEE International Conference on CCET at SAGE University.
10. Gomalavalli, R, Muttan, S (2017) Feature extraction of male renal cell carcinoma. 2nd International Conference Recent Trends in Engineering and Technology at ST. Joseph's Institute of Technology Chennai on 5th May 2017.
10. Gomalavalli, R, Muttan, S (2010) Design and development of noninvasive diagnosis of functional thyroidism. Recent trends in Signal & Image processing Conference at SMK Fomra College of Technology, Chennai on April 2010.

REVIEWER

- 1 International Journal of Medical Informatics.
2. Medical& Biological Engineering Computational Journal.
3. CITAES'22, SRGEC CITAES, Second International Conference On Computational and Intelligent Techniques for Automation of Engineering Systems .

MEMBERSHIP

- 1. Member in ISTE**
- 2. Member in IAECER TILL 2023**
- 3. Member in IAENG Lifetime**
- 4.Member in IAECET.**

Awards / Appreciation / Honors/ Responsibility

- SESSION CHAIR in Two Days 4th IEEE International Conference on Advance Computing and Innovative Technologies in Engineering (ICACITE-2024) Organized By Department of EEE, Galgotias College of Engineering and Technology.(U.P).
- Ratified as a Assistant Professor in JNTUA JUNE 2023.
- SESSION CHAIR in Five Days 3rd IEEE International Conference on power Energy Envirnment and Intelligent Control (PEEIC-2023) Organized By Department of EEE, Balaji Institute of Technology & Management, Greater Noida.(U.P).

- CHAIR PERSON- 6th International Conference On Contemporary Computing And Informatics IC3I- Co-Sponsored by IEEE Uttar Pradesh Section IEEE CONFERENCE RECORD NUMBER # 59117 14-Sep-2023 to 16-Sep-2023 Amity University Uttar Pradesh, Greater Noida Campus,India.
 - SESSION CHAIR-International conference on Recent Trends in Signal Processing in Sri Gudlavelluru Engineering college ,Krishna District.
 - SESSION CHAIR –National Conference on Recent Advancements in Biomedical Engineering-2022 (NCRABE’22). in BHARATH UNIVERSITY, Chennai.
 - Got Best paper award in the CRESEARCH-2021.
 - Act as reviewer for journal Medical & Biological Engg. & Computing (2020)
 - Act as reviewer for International Journal of Medical Informatics - Springer (2019)
 - Received appreciation awards for securing 90 pass percentage in subjects
 - Analog and digital Integrated circuits, Communication Systems (2010-2011)
 - Medical Informatics, Measurements & Instrumentation (2010-2011)
 - Diagnostic and therapeutic Equipment – I (2010-2011)
 - Electron Devices and Electronic Circuits-(2011 2012)

Projects Guided

1. Automatic Pathole Detection using IoT.
2. Hand Gesture System for Physically Challenged People .
3. Medical Image Fusion in Curvelet transforms.
4. Designs of Thyroid images in Wavelet transform.
5. Design and Voice recognition of portable instrument for DEMENSTIA Patient.
6. Design of image fusion in different transform.
7. Determination of tumor in MRI images and it evaluation, etc.,

Industrial Experience

- Testing Engineer, Sri Gayathri power systems, Secunderabad, Andhra Pradesh (2000 - 2002)
- Testing Engineer, Kappa Electrical, Chennai, Tamilnadu (January 2002 to December 2004).

Responsibility

- Act as a chairperson of IEEE/ International conferences
- Act as a Project Coordinator, Thesis Evaluator, Reviewer of conference and Reviewer of journals
- Act as a Class Advisor for second year B.E. ECE
- Act as a Class Advisor for third year B.E. ECE
- Act as a Department Store in-charge
- Act as a Campus Maintenance coordinator
- Act as a Result Analysis in –charge for Dept. of ECE
- Act as a Project Guide and coordinator for final year B.E. ECE
- Act as a coordinator workshop
- Act as a workshop organizing committee member.

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Workshop Organized

1. One day workshop in “Basics of Biomedical Instrumentation” at Jerusalem College of Engineering, Pallikaranai on 13th March 2014.
2. One day workshop in “LABVIEW Fundamentals” at Jerusalem College of Engineering, Pallikaranai on 13th February 2013.
3. One Day workshop in “Importance of Electronics and its Developments” at Priyadharsini College of Engineering and Technology, Kanuparithupadu on 22nd January 2020.
4. One day workshop in “ Nanomaterial’s” at Siddharth Institute of Engineering and Technology, Puttur, Andhra Pradesh on 16th June 2020.
5. One day workshop in “ GATE –related Digital circuits” at Siddharth Institute of Engineering and Technology, Puttur, Andhra Pradesh on 17th June 2021.
6. One day workshop in “ Ultrasound Imaging” at Siddharth Institute of Engineering and Technology, Puttur, Andhra Pradesh on 22nd June 2022.
7. One day Guest Lecture event organised in the Department of ECE, Sri SaiRam Institute of Technology, Chennai on 18.02.2025.

Participated

1. Nearly 25 workshops FDP / STTP/NPTEL/CONFERENCE are attended in the academic year of from 2020 to 2023.
2. IIT Tirupathi Mentorship attendant for Analog Electronic Circuits subject.

NPTEL COURSE

1. NPTEL COURSE in “Introduction to Machine Language” during 2024.
- 2. NPTEL COURSE in “INTRODUCTION OF IOT” during 2022.**
3. NPTEL COURSE in “FUZZY LOGIC AND NEURAL NETWORKS” during 2021.

Theory Paper Handled**DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING**

- ✓ Artificial Intelligence and Machine Learning
- ✓ Fuzzy Logic and Neural Networks.
- ✓ Fundamentals of Digital Computing Systems
- ✓ Computer Networks
- ✓ Computer Organization Architecture
- ✓ Microprocessor and Microcontroller
- ✓ Fuzzy logic and Neural Network
- ✓ Introduction to soft computing

DEPARTMENT OF ELECTRONICS AND COMMUNICATIONS ENGINEERING

- Basic Electronics Engineering
- Analog Electronics Circuits
- Fundamentals of Digital Computing Systems
- Communication System,
- Digital Image Processing,
- Analog and Digital Communication
- Integrated Circuits and Electronic Circuits,
- Electric Circuits and Electron Devices,
- Control system, MI, signals and system etc.,
- Radar system
- Radio Frequency Integrated Circuits

DEPARTMENT OF BIOMEDICAL ENGINEERING

- Biomedical Medical Informatics,
- Biomedical Instrumentation,
- Measurements and Instrumentation
- Diagnostics and Therapeutic Equipment's-I.

Laboratories Handled

- Digital Signal Processing Lab
- Digital Electronics Lab
- Biomedical Instrumentation Lab
- Analog / Digital communication Laboratory
- Analog and Digital Integrated Circuits Laboratory (2)
- Linear Integrated Circuits Lab
- Analog Electronic circuits Lab

- Microwave and Engineering Lab
- Basic Simulation Lab
- Electronic Circuit Analysis Lab
- Antenna Wave Propagation Lab
- Electric Circuits Laboratory and Electron Devices and Circuits Laboratory etc.,,
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Software Skills

Programming Language : MATLAB, C, C++, Unix

Graphing Software : Origin 9.0 & eDRAW

Drawing Software : AutoCAD

Operating System : WINDOWS /XP