



Dr. Sankara Rao Palla

Associate Professor

Department of Electronics & communication Engineering

Raghu Engineering College, Visakhapatnam, Andhra Pradesh **INDIA**

sankararao.palla@raghuenggcollege.in

Interests: Signal Processing; Image Processing; Machine Learning; Computer Vision and It's Applications

Course Taught Previously:

PG.

- Advanced Digital Signal Processing
- Advanced digital system design

UG.

- Digital Signal Processing
- Pulse and Digital Circuits
- Signals and systems
- Digital Electronics
- Satellite Communications
- Control systems
- Random Variables and Stochastic Process
- Digital IC Applications
- Industrial Electronics
- Microwave Engineering
- Instrumentation and Control System
- Intellectual Property rights and Patents
- Analog and Digital IC Applications
- MATLAB/Python for Engineers
- Digital Signal Processing Lab
- Electronic Devices and circuits Lab
- Digital Electronics Lab
- Verilog HDL Lab
- Pulse and Digital Circuits Lab
- Analog and Digital IC Applications Lab

Publications:

International Journals:

- [1] **Sankara Rao palla**, Gupteswar Sahu and Priyadarsan Parida, "A contemporary Survey on Human Gait Recognition", *Journal of Information Assurance and Security*, Volume 15, 2020. [ESCI]
- [2] **Sankara Rao Palla**, Gupteswar Sahu & Priyadarsan Parida," Human gait recognition using firefly template segmentation", *Computer Methods in Biomechanics and Biomedical Engineering: Imaging & Visualization*, Dec 2021. DOI: 10.1080/21681163.2021.2012829. (IF:1.6). [ESCI & SCOPUS Indexed]
- [3] **Sankara Rao palla**, Priyadarsan Parida Gupteswar Sahu, "A multi-view human gait recognition using hybrid whale and gray wolf optimization algorithm with a random forest classifier", *Image and Vision Computing*, 2023. (IF:4.7). (SCIE & SCOPUS Indexed)
- [4] **Sankara Rao palla**, Priyadarsan Parida, and Gupteswar Sahu "Vision-based gait analysis to detect Parkinson's disease using hybrid Harris hawks and Arithmetic optimization algorithm with Random Forest classifier", *International Journal of System Assurance Engineering and Management*, Sept. 2024. (IF:1.6). [ESCI & SCOPUS Indexed]
- [5] **P. Sankara Rao**, K. Amarnadh, J. Anu, K.V.S.Sanjay, M. Pavan Kalyan, "Face Recognition using Deep Convolution Neural Networks Based on Transfer Learning, *NeuroQuantology*, Volume 20, Issue10, Page 5985-6000, August 2022. [SCOPUS]
- [6] **P. Sankara Rao**, V. Sai Snehitha, P. N. D. Yamini, P. Jagadeesh, T. Aakash, "Early Prediction of Student Performance Using Deep Neural Networks" *Mathematical Statistician and Engineering Applications*, Vol. 71 No. 4, August, 2022. [SCOPUS]
- [7] **P. Sankara Rao**, R.Giridhar Venkat, T. Chnadra Sekhar, V.N.V. Pavan Kumar, "Classification Models For Predicting Chronic Kidney Disease: A Comparative Study Of Machine Learning Algorithms" *Journal of Aeronautical Materials*, Vol. 43, Issue-01, 2023. [SCOPUS]
- [8] **P. Sankara Rao**, Sayyad Abdul Latif, T. sai, G. Vishal, P. Chaithanya, "Recognition of Human Emotions Using Convolution Neural Networks (CNN)", *Journal of data acquisition and processing*, Vol. 38 (3), 2023. [SCOPUS]
- [9] Tompala Lakshmi, **Sankara Rao Palla**," Split-SAR ADCs: Improved Linearity with Power and Speed Optimization" *International Journal of VLSI system Design and communication Systems*, Vol.03, Issue.08, October-2015. [UGC Journal]
- [10] **Sankara Rao Palla**, S.Venkata Anand," Image/Video Transmission with Secret Fragment Visible Mosaic Image Technique" *International Journal of Scientific Progress and Research (IJSPR)*, Issue 108, Volume 38, Number 01, 2017. [UGC Journal]
- [11] S Suresh Kumar & **Sankara Rao Palla**, "Zadoff-Chu Matrix for Reduction of PAPR of Precoded OFDM", *International Journal of Research*, 2017. [UGC Journal]
- [12] Bhaskara Rao Doddi, Y E Vasanth Kumar, **Sankara Rao Palla**," Design of an 8-bit Magnitude Comparator with Small Transistor Count and Low Power Using Hybrid STATIC CMOS/ TG Logic, *International Journal of Advanced Research in Computer Engineering & Technology (IJARCET)*, Volume 6, Issue 9, September 2017. [UGC Journal]
- [13] **Sankara Rao Palla**, B V S Vamsikrishna, G S S Gireesha, B V Sai Ram, P Uady, "An Efficient Background Subtraction Using Frame Difference Method for Video Surveillance Applications", *The International journal of analytical and experimental modal analysis*, Volume XII, Issue VIII, August 2020. [UGC Journal]

Conference Proceedings:

[1] **P.Sankara Rao**, K.Chidambara Rao, "IEEE-754 Quadruple Precision floating point core verilog", International Conference on "Emerging Trends in Engineering and Technology" GMT, Kurukshetra, October 2011.

[2] B. Sarada, T.Krishna Mohana, S. Suresh Kumar, **P. Sankara Rao**, K. Indumati, "Sparse MIMO OFDM Channel Estimation And PAPR Reduction Using Generalized Inverse Technique" 3rd international conference on recent Innovations in science, Engineering and management, Sri Venkateswara College of Engineering and technology, Srikakulam, 27th Feb 2016.

[3] **P. Sankara Rao**, Gupteswar Sahu, and Priyadarsan Parida, "Methods for Automatic Gait Recognition: A Review" 10th international conference on Innovations Bio-inspired Computing and Applications, GIET University, Gunupur, 18th Dec 2019. (Springer-Scopus indexed)

[4] **P. Sankara Rao**, Gupteswar Sahu, Priyadarsan Parida, and Srikanta Patnaik, "An Adaptive Firefly Optimization Algorithm for Human Gait Recognition "International conference on smart& sustainable Technologies, GIET University, Gunupur, 16-18 Dec 2021. (Springer conference)

[5] P.Sirish Kumar, M.S.R.Naidu, A.Jayalaxmi, **Sankara Rao Palla**, Ch.Chandrika, P.Nikhil, "Advancing Short-Term Solar Forecasting: Comparative Analysis of Machine Learning and Deep Learning Models for Enhanced Accuracy and Reliability" Second International Conference on Advances in Information Technology (ICAIT-2024). (IEEE-Scopus indexed)

[6] **Sankara Rao Palla**, Gupteswar Sahu, G.Sunil Kumar, T.S.Kavitha, Ch.Tejesh Kumar, and Priyadarsan Parida, "Pneumonia Detection from chest X-ray images using Firefly Optimization Algorithm and Ensemble Deep Learning Models " 6th International conference on Communication and Intelligent Systems (ICCIS2024), , 08-09 Nov 2024. (Springer- Scopus indexed)

Seminars, Workshops,FDPs and STTPs:

S. No	Name of the Programme	Date	Conducted by
1	Advances in signal and image processing	1 st and 2 nd March, 2013.	TEQIP-II, AITAM, Tekkali
2	Recent trends in wireless communication systems	25 th and 26 th March, 2013	TEQIP-II, GVP college of Engineering (autonomous), Visakhapatnam
3	Advances In Signal Processing	30&31 st august 2013	TEQIP-II, AU College Of Engineering (Autonomous), Visakhapatnam
4	Signals and Systems	January 2-12, 2014	ISTE national workshop, IIT Kharagpur
5	Development of Wireless Sensor Networks using Simulator (NS2)- Hands-on experience	01 st -05 th December 2015	Gudlavalleru Engineering College

6	Analog and digital circuit design using CADENCE	December 9 th -11 th , 2015	GVP college of engineering Visakhapatnam
7	Basics of MATLAB	19 th and 20 th April 2017	Raghu engineering college Visakhapatnam
8	Crux Of Writing Journal Papers, Research Project Proposals and Patents	27 th and 28 th April, 2017	Raghu engineering college Visakhapatnam
9	Advances in practical Antenna Design	25 th may-30 th may, 2017	Raghu Engineering College
10	Digital Image Processing	July-oct 2019	NPTEL-AICTE
11	Artificial intelligence	24-05-2020 to 29-05-2020.	Chalapathi institute of technology
12	Emerging technologies in ECE	18-05-2020 to 22-05-2020.	S V Engineering College, Tirupathi,
13	Artificial intelligence, machine learning and its applications	29-05-2020 to 02-06-2020	Tirumala Engineering College, Narasaraopeta,
14	Research challenges and emerging trends in ECE	27-05-2020 to 01-06-2020	Chalapathi institute of technology
15	ICT Tools for Engineering College Teaching and Outcome Based Learning	09-11-2020 to 14-11-2020	Raghu Institute of Technology
16	Advance & Emerging Trends in Signal Processing using Machine Learning	7- 12-2020 to 12-12-2020	GIET UNIVERSITY
17	Bio-Medical Signal Processing for Smarter Mobile Healthcare	2021-7-19 to 2021-7-23	GIET UNIVERSITY
18	Machine Intelligence for Computer Vision	28.02.2022 to 05.03.2022	Indian Institute of Information Technology, Design and Manufacturing, Kancheepuram Chennai – 600127
19	Internet of Things	24-01-2022 to 30-01-2022	GITAM Institute of Technology, Visakhapatnam
20	Artificial Intelligence, Machine Learning and Deep Learning with MATLAB and Simulink	23-11-2022 to 25-11-2022	Raghu Engineering College
21	Accreditation and Outcome Based Education	19.07.2022 to 23.07.2022	NITTR, Chennai
22	Enhancing faculty expertise: Communication and signal/image Processing	10-07-2023 to 15-07-2023	Aditya college of Engineering and Technology, Surampalem

23	Research Methodology	07th to 11 th Aug 2023	Raghu Engineering College
24	The Joy of Computing Using Python	Jul-Oct 2023	NPTEL-AICTE
25	Computer Vision and Image Processing – Fundamentals and Applications	Jan-Apr 2024	NPTEL-AICTE
26	Recent Trends in Embedded Systems and IoT	27/05/2024 to 01/06/2024.	GMR Institute of Technology
27	Cutting-Edge Research and Technologies in Signal Processing using MATLAB	12th to 17th August, 2024	Department of ECE, MLR Institute of Technology, Hyderabad
28	Semiconductor devices, Modeling & Circuit Technology	19th to 24th August, 2024	Lendi Institute of Engineering and Technology, Vizianagaram
29	Building Web Development Solutions with Cloud Computing	02-09-2024 to 06-09- 2024	AICTE& Edunet Foundation
30	Python for Data Science	July-Aug 2024	NPTEL-AICTE
31	High Performance Computing for Medical Image Processing and Computer Vision	09/12/2024 to 14/12/2024	ATAL Academy& MNNIT Allahabad
32	Next Gen Solutions for Medical Challenges Powered by AI Based Intelligent Systems	16/12/2024 to 21/12/2024.	ATAL Academy& Malla Reddy College of Engineering & Technology

Visit to outside institute/organization:

S. No	Instt. Organization visited	Purpose of visit
1.	International Conference on "Emerging Trends in Engineering and Technology" GIMT, Kurukshetra, October 2011.	For presenting paper
2.	3rd international conference on recent Innovations in science, Engineering and management" Sri Venkateswara College of Engineering and technology, Srikakulam, 27th Feb 2016.	For presenting paper
3.	international conference on Innovations Bio-inspired Computing and Applications" GIET University, Gunupur, 18th Dec 2019.	For presenting paper
4.	International conference on smart& sustainable Technologies, GIET University, Gunupur, 16-18 Dec 2021.	For presenting paper

Awards and Honors:

1. Best Paper Award for the paper "An Adaptive Firefly Optimization Algorithm for Human Gait Recognition" in international conference on smart& sustainable Technologies, GIET University, Gunupur, on Dec 2021.
2. Recognized as a NPTEL Discipline Star JUL-DEC 2022.

Additional Responsibility:

Class coordinator, Training& placement coordinator, M.Tech coordinator, Exam cell coordinator, NBA, and NAAC Criteria related works.

Member in:

1. ISRD (Lifetime membership ID: M4150903812)
2. IAENG (Member No:188930)
3. IEEE(Member No: 97513966)-2021

EXTRACURRICULAR ACTIVITIES:

- Reviewer for "Engineering applications of artificial intelligence" Journal.
- Reviewer for "PloS one" Journal.

Online Course Certification's:

S.No.	Course	Duration	Year	Course offered by	Score %
1	Medical Image Analysis	4 weeks	2017	NPTEL	61
2	Fundamentals of Digital Image and video processing	12weeks	2017	Coursera	-
3	Digital image processing of Remote sensing Data	4 weeks	2017	NPTEL	62
4	Discrete-time signal processing	12 weeks	2018	NPTEL	53
5	Digital circuits	12 weeks	2018	NPTEL	77
6	Principles of signals and systems	12 weeks	2019	NPTEL	72
7	Digital image processing	12weeks	2019	NPTEL	77
8	Machine learning classification algorithms using MATLAB	7 hours	2020	Udemy	-
9	Introduction to Machine learning	12 weeks	2020	NPTEL	93
10	Analog communication	12 weeks	2022	NPTEL	55
11	MATLAB Onramp	7 hours	2023	MathWorks	-
12	The Joy of Computing Using Python	12weeks	2023	NPTEL	62
13	Computer Vision and Image Processing - Fundamentals and Applications	12weeks	2024	NPTEL	52
14	Python for Data Science	4 weeks	2024	NPTEL	65