Staff Profile

Personal Information

Name of Teaching Staff:	Dr. Sachin Vasant Chaudhari
Designation:	Associate Professor
Department :	Electronics and Computer Engineering
Date of joining :	21/07/2010

E Mail ID :	chaudharisachinece@sanjivani.org.in
Contact No:	**9527740879**

Education Details

Qualification	Specialization with Class or Grade	University	Year
UG	BE Electronics: 1ST Class	NMU - Jalgaon	2004
PG	ME Electronics: 1ST Class	SPPU-Pune	2013
Ph.D.	Electronics Engineering	Shri.J. J. T University-Rajasthan	2018

Total experience in years: 19.5

Teaching:	**18 years**
Industry:	**1.5 years**

Research and Publications

1. Deep Learning Approach for Segmenting Nuchal Translucency Region in Fetal Ultrasound Images for Detecting Down Syndrome using GoogLeNet and AlexNet, Journal of Electronics, Electromedical Engineering, and Medical Informatics, ,Vol. 7, No. 2, April 2025, pp: 450-459; eISSN: 2656-8632.(Scopus)

2. Parkinson's disease detection from speech using combination of empirical wavelet transform and Hilbert transform, International Journal of Speech Technology, https://doi.org/10.1007/s10772-025-10172-6, Springer Nature 2025. (Scopus)

3. Accelerating the development of advanced driver assistance systems using a system engineering V-cycle based, International Journal of Vehicle Autonomous Systems (IJVAS), Vol. 17, No. 3/4, 2023 ,

DOI: 10.1504/IJVAS.2025.10070391. (Scopus)

4. Review of gait recognition systems: approaches and challenges, International Journal of Electrical and Computer Engineering (IJECE) Vol.15,No.1, February2025,pp.349~355 ISSN: 2088-8708, DOI: 10.11591/ijece.v15i1.pp349-355. (Scopus)

5. Comprehensive Review On Recent Progress, Challenges, And Future Prospects In Deep Learning For Robust Deformable Object Detection And Segmentation, Nanotechnology Perceptions, 20 No. S12 (2024) 191-203, (Scopus)

6. Automated Rice Disease Diagnosis using Deep Learning: A Wavelet-Enhanced VGG-16 Model with Manta Ray Optimization, Library Progress International, Vol.44 No. 3, Jul-Dec 2024: P. 17139-17147, ISSN 2320 317X(Scopus)

7. Optimized Multiple Mobile-Sink Energy Efficient Clustering Algorithm in Wireless Sensor Networks. SSRG International Journal of Electronics and Communication Engineering, 2024,11(7),pp.10–19,ISSN:2348-8549. (SCOPUS)

8. Design of Self-Duplexed Hybrid Substrate Integrated Waveguide Antenna for Sub-6 and Mm-Wave Application *SSRG International Journal of Electronics and Communication Engineering,* 2024,11(7),pp.1–9.ISSN:2348-8549,ISSN:2348-8549/ (SCOPUS)

9. Enhanced Multiple Mobile-Sink Energy Efficient Clustering Algorithm in Wireless Sensor Networks, International Journal of Intelligent Systems And Applications In Engineering,(2024),2024,12(19s), pp.01–09, ISSN:2147-679921. (SCOPUS).

10. Algorithmic material selection for wearable medical devices a genetic algorithm-based framework with multiscale modelling, The Scientific Temper (2024) Vol.15(1): 13-19,E-ISSN:2231-6396,ISSN:0976-8653, (WoS).

11. Optimizing biocompatible materials for personalized medical implants using reinforcement learning and Bayesian strategies, The Scientific Temper (2024) Vol. 15 (1): 51-57,E-ISSN:2231-6396,ISSN:0976-8653, (WoS).

12. UV- Bottle TDS, pH and Temperature Indicator ,Strad Research Journal , Volume 10, Issue 7, 2023,Pages 165-171. ISSN: 0039-2049.(WoS).

13. Comparison of different techniques for optimization of Evaporation process in cane sugar plants, novyi mir research journal, 08 (6), 2023,Pages 303-307, ISSN.no: 0130-7673. (WoS).

14. Exploring the Relationship between Internet of Things and 6G Networks: A Review, Strad Research Journal, VOLUME 10, ISSUE 9, 2023, ISSN: 0039-2049.(WoS).

15. Performance Analysis of Rician Channel in Orthogonal Frequency Division Multiplexing" Journal

of Advances and Applications in Mathematical Sciences, Mili Publication,Volume 21, Issue 9, July 2022,pp. 5145-5151.ISSN 0974-6803. (WoS).

16. Perception of Objects Qualities using Deep Learning CNN architecture 'NavNet' AIP Conference Proceedings. March 2023, Pages 246-255 ,ISSN:0094-243X. (Scopus).

17. Load Flow Analysis of 6 MW Biomass Power Plant," Networks and Systems, vol.no.191.Springer, Singapore. DOI: https://doi.org/10.1007/978-981-16-0739-4_20. 2022, ISSN: 2367-3389. (Scopus).

18. Hybrid Peddle and Solar Electric Vehicle for Physically Challenged People, Journal of Test Engineering & Management, Vol.no.83 Page.no:2037-2042,Issue:March-April 2020,ISSN: 0193-4120. (Scopus).

19. Solar Energy System with Photovoltaic", Journal of Test Engineering & Management, Volume 83 ,pp.2010-2017 ,Issue: March - April 2020, ISSN: 0193-4120. (Scopus).

Book Chapters

1. Wearable Devices For Health Monitoring: Revolutionizing Personal Healthcare, Source **Title: Hybrid Soft Computing Techniques for Machine Learning and Optimization** , IGI Global Scientific Publishing ,pages:191-208, ISBN13: 9798369368640, DOI: 10.4018/979-8-3693-6864-0.ch010.**(Scopus)**

Papers presented in conferences:

1. Dynamic Mobility-Adaptive and Context aware Converge cast protocol for wireless body area networks: International Conference on Distibuted Computing and Communication systems, ICDCCS-2025, 18 -19 April 2025,organized by Kalpataru Institute of Technology Tiptur.

2. Material Selection Optimization For Wearable Medical Devices: A Hybrid Approach Using Genetic Algorithms And Multiscale Modeling, International Conference on Recent Advances In Engineering And Sciences -2025, 22 -23 April 2025, Bharati Vidyapeeth's College of Engineering,Lavale, Pune.

3. GRDDN: Enhanced Gait Recognition Using a Deep Dense Network, Proceedings of the International Conference on Inventive Computation Technologies (ICICT-2025) IEEE Xplore,DVD Part Number: CFP25F70-DVD; ISBN: 979-8-3315-1223-1.

4. Optimization of Waste Classification System: Leveraging Sensor Technologies for Advanced Segregation and Waste Reduction, 6th International Conference on Engineering and Technology-ICET 2025(Best paper award).

5. Recent Advances, Challenges and Future Prospects of Multi-Crop Leaf Disease Detection Algorithm using Deep Learning: A Comprehensive Review, Proceedings of the International Conference on Inventive Computation Technologies (ICICT-2025) IEEE Xplore, DVD Part Number: CFP25F70-

DVD; ISBN: 979-8-3315-1223-1.

6. Comprehensive Review of Artificial Intelligence Based Solar Power Generation Forecasting: Addressing Challenges and Future Prospects, Proceedings of the International Conference on Inventive Computation Technologies (ICICT-2025) IEEE Xplore, DVD Part Number: CFP25F70-DVD; ISBN: 979-8-3315-1223-1.

7. AI-driven advancements for enabling IoT in the 6G era: A comprehensive study, *AIP Conf. Proc.* 3175, 030012 (2025).

8. A Comprehensive Survey on Nuchal Translucency Segmentation and Thickness Estimation, Proceedings of the 7th International Conference on Inventive Computation Technologies (ICICT 2024) IEEE Xplore Part Number : CFP24F70-ART ; ISBN : 979-8-3503-5929-9.

9. Real Time Performance Monitoring of Solar PV Panel IoT System for Energy Optimization, 4th International Conference on Innovation Practices in Technology and Management (ICIPTM 2024), IEEE Xplore, DOI: 10.1109/ICIPTM59628.2024.10563559.

10. Rice Plant Classification Using Deep Learning, National Conference on Pervasive Computing (NCPC) – 2024 April 05, 2024.

11. Transforming Finance Through Automation Using AI-Driven Personal Finance Advisors," *2023 4th International Conference on Computation, Automation and Knowledge Management (ICCAKM)*, Dubai, United Arab Emirates, 2023, pp. 1-5, doi: 10.1109/ICCAKM58659.2023.10449538.

12. "Automated Deep Learning with Wavelet Neural Network Based Rice Plant Classification", International Conference on Intelligent Data Communication Technologies and Internet of Things (IDCIoT 2023),IEEE Xplore.

13. "Reliable Densely Connected Network with Machine Learning based Diabetic Retinopathy Grading Approach", Proceedings of the International Conference on Automation, Computing and Renewable Systems (ICACRS 2022)IEEE Xplore Part Number: CFP22CB5-ART: ISBN: 978-1-6654-6084-2 **(Scopus).**

14. "Modified Aquila Optimization based Route Planning Model for Unmanned Aerial Vehicles Networks", Proceedings of the International Conference on Automation, Computing and Renewable Systems (ICACRS 2022) IEEE Xplore Part Number:CFP22CB5-ART:ISBN: 978-1-6654-6084-2, **(Scopus).**

15. "Bayesian Optimization with Deep Learning based Crop Type Classification on UAV Imagery", Proceedings of the International Conference on Augmented Intelligence and Sustainable Systems (ICAISS-2022) DVD Part Number: CFP22CB2-DVD; ISBN: 978-1-6654-8961-4, **(Scopus).**

16. Performance Analysis of Rician Channel in Orthogonal Frequency Division Multiplexing ,AICTE Sponsored 7th International Conference on "Computational Optimization, Modelling and Simulation: Recent Trends and Challenges", (Shaastrarth-2022), ISBN: 978-93-5607-877-2

UGC Care New

1.Enhancing Power System Stability Using Neuro-Fuzzy Control Integrated With Genetic Algorithms, ICTACT Journal On Soft Computing, April 2024, Volume:14, Issue: 04, ISSN: 2229-6956, DOI: 10.21917/ijsc.2024.0464.(UGC Care)

2. Dynamic Routing Algorithm For Efficient Wireless Traffic Management Using Evolutionary Algorithm, ICTACT Journal On Communication Technology, September 2023, Volume: 14, Issue:03, ISSN: 2229-6948 , DOI: 10.21917/ijct.2023.0448(UGC Care).

3. Optimizing Plant Disease Prediction: A Neuro-Fuzzy-Genetic Algorithm Approach, ICTACT Journal On Soft Computing, October 2023, Volume: 14, Issue: 01,ISSN: 2229-6956, OI: 10.21917/ijsc.2023.0445. (UGC Care)

4. Deep Learning-Based Fault Detection In Nano Electronics Circuits For Robustness Enhancement, ICTACT Journal On Microelectronics, October 2023, Volume: 09, Issue: 03, ISSN: 2395-1680, DOI: 10.21917/ijme.2023.0276. (UGC Care)

5. Predicting Customer EMI Credit Risk in Banking: A Behavioral Model Utilizing Machine Learning, SAMRIDDHI:A Journal of Physical Sciences, Engineering and Technology, Volume 14, Issue 3 2022, ISSN:2454-5767. (UGC Care)

6. Crafting an Academic Research Paper: Guidelines for Research Scholars, SAMRIDDHI : A Journal of Physical Sciences, Engineering and Technology, Volume 14, Issue2, 2022, ISSN:2454-5767. (UGC Care)

7. A Comprehensive Study on the Integration of Robotics in Healthcare, Samdarshi , Vol 16, Issue 5 (October 2023),ISSN: 2581-3986. (UGC Care).

8. UV- Bottle with TDS Indicator " Dogo Rangsang Research Journal , Volume 12, Issue 12, no 1, December 2022,Pages 182-184. ISSN 2347-7180.(UGC Care).

9. UV- Bottle with pH Indicator " Dogo Rangsang Research Journal , Volume 12, Issue 10, no 2, Octobar 2022,Pages 182-184. ISSN 2347-7180.(UGC Care)

10. Performance Analysis of Rayleigh and Rician Channels in Orthogonal Frequency Division Multiplexing, CiiT International Journal of Digital Signal Processing, Vol 10, No 7, July 2018,ISSN: 0974-9705. (UGC Care)

UGC Care old

1. Performance Analysis and BER comparison of various channels in OFDM Systems, AGU International Journal of Science and Technology, Volume 05 July2017,ISSN : 2455-0493

2. Evaluation of channel in orthogonal frequency division multiplexing",International journal of advance research in science and engineering,Vol 06, Issue 9,2017, ISSN: 2319-8354.(UGC Care Old)

3. Comparison of Channel Estimation Techniques for OFDM",International journal of advance research in science and engineering,Vol 03, Issue 4,2013,Page Number: 1336 - 1339, ISSN: 2248-9622.(UGC Care Old)

4. Channel Estimation In OFDM,International journal of advance research in science and engineering,Vol 03, Issue 1 ,2013,Page Number: 1413 - 1415, ISSN: 2248-9622.(UGC Care Old).

Research Profile URL	
Google Scholar	https://scholar.google.com/citations?user=KAwKmlcAAAAJ&hl=en
Scopus	https://www.scopus.com/authid/detail.uri?authorId=58093988900
Orcid	https://orcid.org/0009-0005-8856-8905
Web of Science	https://www.webofscience.com/wos/author/record/HMV-0192-2023
Other Research Details	
Ph D Guide ?Give field & University:	**PhD Guide:** Yes **Field:** • Wireless Communication • PLC and Automation • Devices and Circuits
	University: SPPU, Pune
	Presently 03 Research Scholars are pursuing their Ph.D

Books Published			
	"Bio-Medical Electronics and Instrumentation", ISBN-978-81-972059-2-7, DOI:https://doi.org/10.5281/zenodo.10985683		

IPRs/Patents	Sr.no	Title	Date of Publication/Grant
	1	Smart Fluid Cooling And Heating System(446412-001)	02/02/2025
	2	Prismaview Projector(414610-001)	23/04/2024
	3	Personalized Medicine Packaging Device(6358154)	17/02/2024
	4	Advance health Monitoring system through cyber physical system integrated with cyber security(202241013215A)	18/03/2022
	5	An artificial intelligence system embedded with sensor for prediction and detection of mouth and foot disease(202211011964A)	01/04/2022
	6	Pervasive computing with IOT for controlling the speed of vehicles remotely through wireless signal transmission.(202241021352A)	22/04/2022
	7	Machine Learning based approach to analyse the Prosocial behaviour of Colleagues of E-Commerce Site(202221011870A)	20/05/2022

Professional Memberships:	1. Member of Institution Engineers (MIE-161046-5). 2. Member of International Association of Engineers (Member Number: 350222)
Interaction with professional institutions	--

Consultancy Activities

Duration	Title of Activity	Issued Organization	Amount
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Grants fetched

Duration	Title	Issued Organization	Amount
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Awards
Received Distinguish Engineer Award by IRDO in 2018.

Reviewer of the International Journals

1. Appointed as Editorial board member for American Journal of Science, Engineering and Technology- 18 April 2025 to 18 April 2028 (http://www.ajset.org).
2. Appointed as Reviewer for International Conference on Innovation, Sustainability, and Applied Sciences (ICISAS 2025)- Curtin University Dubai.

FACULTY DEVELOPMENT PROGRAMMES ATTENDED

Acad .Year	Event Name	Event Type	Event Status Type	From Date	To Date	Funding Source
2024-25	Mastering Research Excellence: AI assisted Scientific writing and high impact publication	One week	National	25/11/25	30/11/24	Sanjivani COE
2024-25	National Education Policy(NEP-2020)	One day workshop	State	11/05/24	11/05/24	Under QIP-SPPU,Pune
2024-25	Mentor Mentee Program 02 days training cum exposure Visit, II Mentor Mentee scheme support from MOM's Innovation Cells, VIT Pune	Training	State	12/08/24	13/08/24	IIC cell VIT, pune
2023-24	Living with climate change and water management	Online course	National	21/03/24	21/03/24	Centre for environment eduction, Gov. India
2023-24	NPTEL Project Management	FDP	National	01/01/24	01/04/24	NPTEL
2021-22	One week STTP on "WEB Technology" organized by K J College of engineering Pune	STTP	National	04/07/2022	8/07/2022	ISTE Pune
2021-22	One week STTP on "Data Science,organized by K J College of engineering Pune	STTP	National	11/07/2022	15/07/22	ISTE Pune
2020-21	One Week Online Faculty Development Program on Promoting Quality Culture in Technical Institutions" organized by AISSMS College of Engineering Pune	Workshop	State	25/05/2020	29/05/2020	UGC
2020-21	FDP on "Role of National Education Policy in Nation Building"	Workshop	National	26/03/2021	26/03/2021	------
2020-21	National Level One week Faculty Development Program on Arduino	Workshop	National	25/05/2020	29/05/2020	Spoken Tutorial IIT Bombay

2020-21	One-week Online Faculty Development Program on "New Challenges & Issue of Indian Electricity Market for Upcoming Decade-2030" organized by Department of Electrical Engineering In collaboration with MSEDCL'S Institute of Training & Safety, Eklahare, Nashik	Workshop	State	11/05/2020	15/05/2020	SPPU Pune
2020-21	Future Technologies for Smart Cities	FDP	National	01/02/2021	05/02/2021	----
2020-21	Role of National Education Policy in Nation Building"	FDP	National	26/03/2021	26/03/2021	Dr. Babasaheb Ambedkar Technological University, L0nere
2020-21	AICTE-ISTE Sponsored One Week Induction / Refresher programme on Role of ICT in Teaching-Learning Process	Induction / Refresher programme on "Role of ICT in	National	14/12/2020	19/12/2020	AICTE
2020-21	Harnessing the power of Business Management	STTP	State	15/06/2020	17/06/2020	Mumbai University
2019-20	One-week Online Faculty Development Program on "New Challenges & Issue of Indian Electricity Market for Upcoming Decade-2030"	FDP	State	11/05/2020	15/05/2020	MSEDCL'S Institute of Training & Safety, Eklahare,
2019-20	One Week Online Faculty Development Program on "Promoting Quality Culture in Technical Institutions"	FDP	National	25/05/2020	29/05/2020	UGC
2019-20	Webinar on "IoT for Music Therapy	Webinar	State	02/06/2020	02/06/2020	Suman Ramesh Tulsiani Technical Campus, Faculty of
2019-20	ICT tools for Online Teaching"	FDP	State	26/05/2020	26/05/2020	Sanjivani College of Engineering, Dept. of MBA, Ko
2019-20	FDP on New Challenges & Issue of Indian electricity market for upcomming decade 2030	Faculty Development Program	National	11/05/2020	15/05/2020	Sandip University Nasik and MSEDCL Institute of Tr
2019-20	National Level One week Online Faculty Development Program on Arduino	FDP	National	25/05/2020	29/05/2020	Spoken Tutorial IIT, Bombay
2015-16	Faculty development program on Mini-project and seminar for TE E&TC engineering revised syllabus 2012 course	Workshop	State	17/01/2015	17/01/2015	SPPU Pune
2016-17	Research Innovations	Seminar	State	12/02/2018	12/02/2018	Shri J J T University, Rajasthan
2015-16	FDP on Advances in Wireless and	Workshop	State	07/06/201	11/06/2016	Sinhgad college of engi. and

	Mobile Technologies			6		Tektronix
2015-16	Advance research methodology,inovative teaching methods & communication skills	Workshop	National	14/11/2015	16/11/2015	Shri J J T University, Rajasthan
2014-15	Nature Inspired Computations in Engineering (NICE))	Workshop	National	18/05/2015	22/05/2015	UGC
2014-15	Faculty Orientation Workshop on PLC & Automation	Workshop	National	11/06/2015	13/06/2015	SPPU Pune

FACULTY DEVELOPMENT PROGRAMMES ORGANIZED

1. "Awareness of National Education Policy (NEP -2020)" for 12th passout students & Parents, 13th July 2024
2. Mastering Research Excellence: AI assisted Scientific writing and high impact publication for Faculty on 25 th Nov to 30N0v 2024

INVITED LECTURES IN CONFERENCE/SEMINAR

1. Appointed as Member of Course development Committee for Circuit simulation and PCB Lab- SNJB Chanwad, Nasik.

OTHER Professional URLs

Personal Website	-
Linked In Profile	https://www.linkedin.com/in/dr-sachin-chaudhari-3b9b2526b?utm_source=share&utm_campaign=share_via&utm_content=profile&utm_medium=android_app
Facebook	https://www.facebook.com/share/1Auzzjr8wg/
YouTube Channel	https://studio.youtube.com/channel/UCgpE_l7QwPbtFbZv9hBys1w/videos/upload?filter=%5B%5D&sort=%7B%22columnType%22%3A%22date%22%2C%22sortOrder%22%3A%22DESCENDING%22%7D
Other	------