FACULTY PROFILE

<table>
<tr><td colspan="2">Name of the Faculty:</td><td colspan="3">Dr. Ch. V.M.S.N. Pavan Kumar</td><td rowspan="5"></td></tr>
<tr><td colspan="2">Designation:</td><td colspan="3">Assistant Professor</td></tr>
<tr><td colspan="2">Department:</td><td colspan="3">ECE</td></tr>
<tr><td colspan="2">Date of Birth:</td><td colspan="3">18/06/1989</td></tr>
<tr><td>AICTE – ID:</td><td colspan="4">1-3364138463</td></tr>
<tr><td>Education</td><td colspan="5">• Ph.D. - Electronics & Communication Engineering, Pondicherry Central University, Puducherry (2018)
• M.Tech. - Communication Engineering & Signal Processing, Bapatla Engineering College / Acharya Nagarjuna University (2013), CGPA: 9.35
• B.Tech. - Electronics & Communication Engineering, Chirala Engineering College / JNTU Kakinada (2010), 74.95%
• Intermediate - Mathematics, Physics & Chemistry, Vignana Bharathi Junior College, Chirala (2006), 93.9%
• SSC - Z.P.H. School, Chinnaganjam (2004), 74.1%</td></tr>
<tr><td rowspan="2">Experience</td><td colspan="2">Teaching: 11 Years</td><td colspan="2">Industry: Jan 2026-Present (AICTE Industry Fellow)</td><td rowspan="2">Total: 13 Years</td></tr>
<tr><td colspan="2">Research: 2 Years</td><td colspan="2">Others: 0</td></tr>
<tr><td colspan="2">Research Specialization</td><td colspan="4">Computer Vision; Artificial Intelligence, Machine Learning and Deep Learning; Unmanned Aerial Vehicles (UAVs) and Robotics; 5G/B5G Wireless Communication; Heterogeneous/Femtocell Networks and Interference Mitigation; Cognitive Radio, Spectrum Sensing.</td></tr>
<tr><td>Courses taught</td><td colspan="5">UG:
• Electronic Circuit Analysis
• Analog Electronics
• Digital Image Processing
• Data Structures using Python
• Pulse and Digital Circuits
• Network Analysis
• Cellular and Mobile Communication
• Microprocessors and Microcontrollers
• Digital Logic Design
• Analog and Digital Communications
• Electronic Devices and Circuits
PG:
• Adaptive Signal Processing
• Random Process and Information Theory</td></tr>
</table>

Research Contributions

International/National Peer Reviewed Journals

S. No.	Title of paper	Journal	Year	Volume	Pages	Indexing SCI/WoS/ SCOPUS, Google Scholar)
1	A Deep Learning Framework for Accurate Number Plate Recognition using OWL-V2 and Paddle OCR,	International Journal of Science and Engineering Invention	2025	11	-	Google Scholar
2	IoT Enabled Railway Track Crack Detection System,	International Journal of Engineering Technology and Management Sciences	2025	9	-	Google Scholar
3	Optimization Driven Spike Deep Belief Neural Network Classifier: A Deep-Learning Based Multichannel Spike Sorting Neural Signal Processor Module for High-Channel-Count Brain Machine Interfaces,	Artificial Intelligence Review	2023	56	2207–2233	SCI
4	Lung Cancer Detection Using Deep Learning Techniques,	Journal of Nonlinear Analysis and Optimization	2024	15	824–830	Google Scholar
5	Automatic Recognition of Lung Tumor Using Convolutional Neural Networks,	Cardiometry	2023	-	302–308	Scopus
6	A Bio-Inspired AlexNet-DrpXLm Architype for an Effective Brain Stroke Lesion Detection and Classification,	Concurrency and Computation: Practice and Experience	2022	-	-	SCI
7	Non-Dominated Sorting Particle Swarm Optimization for Multi-Channel Cooperative Spectrum Sensing in Heterogeneous Green CRNs,	International Journal of Advanced Intelligence Paradigms	2021	18	25–45	Google Scholar

8	Road Irregularities Detection and Driver Alert System,	Journal of University of Shanghai for Science and Technology	2020	22	860–866	Scopus
9	Reconfigurable Tri-Band Planar Monopole Antenna for LTE and WiMAX Applications using FR4 Material,	Materials Today: Proceedings	2020	-	-	Scopus
10	Dynamic Allocation of Spectrum in Hybrid Access Cognitive Femtocell Networks with Practical Spectrum Sensing,	International Journal of Advanced Science and Technology	2019	28	-	Scopus
11	Optimial Decoder Architecture for Polar Codes Using Belief Propagation Technique,	Journal of Emerging Technologies and Innovative Research	2019	6	35–41	UGC CARE
12	A Game Theoretic Approach for Dynamic Spectrum Allocation in Hybrid Access Cognitive Femtocell Network,	Journal of Computational and Theoretical Nanoscience	2018	15	2092–2098	Scopus
13	Design, Simulation and Testing of Digital Beacon Receiver using ADS Software,	i-manager's Journal on Communications and Systems	2018	7	16–27	Google Scholar
14	High Density Impulse Noise Removal using Trimmed Global Mean,	Journal of Advanced Research in Dynamical and Control Systems	2017	9	780–789	Scopus
15	Paraunitary Filter Bank Based Spectrum Sensing to Avoid Interference in Macro-Femto Cellular Networks,	Journal of Advanced Research in Dynamical and Control Systems	2017	9	708–721	Scopus
16	Performance Comparison of Paraunitary Analysis Filter Bank Based Spectrum Sensing Technique over Multipath Channels,	Indian Journal of Science and Technology	2017	10	-	Scopus

17	Interference Mitigation in Femtocell Networks by Efficient Frequency Reuse,	International Journal of Knowledge Engineering and Soft Data Paradigms	2016	5	248–261	Google Scholar
18	A Review on 3GPP Femtocell Networks and its Technical Challenges,	Indian Journal of Science and Technology	2016	9	-	Scopus
19	Design, Analysis and FPGA Implementation of N-Bit Vedic Multiplier Based on Different Adder Architectures,	International Journal of Advanced Research in Computer and Communicatio n Engineering	2015	4	453–459	Google Scholar
20	Region of Interest Medical Image Compression Using Set Partitioning in Hierarchical Trees,	International Journal of Engineering & Science Research	2015	5	812–820	Google Scholar
21	Development of a Method for Wavelet Multispectral Analysis to Weather Forecasting,	International Journal on Recent and Innovation Trends in Computing and Comm.	2013	2	2770–2774	Google Scholar

Books Published

S. No.	Title of the book	Publisher	year
NIL			

Book Chapters Published

S.No.	Title of the Chapter	Book Title	Publisher	year
1	Low-Profile Dual-Band Filtering Patch Antenna for LTE and ISM Band Applications	Futuristic Trends in Network & Communication Technologies, Vol. 3, Book 2	IIP Series	2024
2	Dual Band Hybrid DRA Antenna Design for WLAN Application	Futuristic Trends in Network and Communication Technologies, Vol. 2, Book 19, Part 3	IIP Proceedings	2022

3	Review on Sparse-Based Multipath Estimation and Mitigation: Intense Solution to Counteract the Effects in Software GPS Receivers	Multifunctional Operation and Application of GPS	IntechOpen	2019

Details of Patents (Filed & Granted)

S. No.	Applications Number	Title of the Patent	Date of Filing/Publishing	Published/Granted
1	202641044744 A	Design and FPGA Implementation of an Optimized 8-bit ALU for Lightweight Cryptographic Operations	24 Apr. 2026	Published
2	202641046956 A	Indian Traffic Sign Visual Question Answering Using Vision-Language Models	24 Apr. 2026	Published
3	202641020393 A	Dynamic Group-Based Ping Lock Arbiter with Skip Logic for 4 Requesters	6 Mar. 2026	Published
4	202541059505 A	2D Sign Language Recognition Using Indian Sign Language Dataset with Convolutional Neural Network	30 May 2025	Published
5	202441035415 A	High Secure Graphical Password Authentication System using Dual Axis of GUA	10 May 2024	Published
6	201941019143 A	Clogging Control and Prevention in Routing in WSN	14 Jun. 2019	Published

Details of Conferences/FDPs/STTPs/webinars/Workshops Organized

S.No.	Name of the event	Role	Dates
1	6G R&D Center Inauguration, MoU Signing and A Technical Talk on AI & ML Applications in 6G	Organizer (specific role not stated in CV)	03rd Dec., 2025

2	Micro Architecture Design: Deep Dive into RISC-V	Organizer (specific role not stated in CV)	10–11 Jul. 2023
3	Applications of Deep Learning Techniques to 5G and Beyond 5G Wireless Communication Technologies	Organizer (specific role not stated in CV)	19–21 Sep. 2022
4	Recent Trends in Next Generation Communication Technologies	Organizer (specific role not stated in CV)	16–20 Aug. 2021

Details of Conferences/FDPs/STTPs/Webinars/Workshops Participated

S.No.	Name of the event	Organized by	Dates
1	One week FDP on AI/ML Applications for Next-Generation Wireless Communication	IIIT Gwalior	03-09th Feb., 2025
2	One week FDP on Latest Trends in 5G/6G Wireless Communication	CTL NIT Warangal	20-24th May, 2024
3	National-level FDP on: Emerging Trends in VLSI Device, Circuit & System Design—A Practical Approach	RVR & JC College of Engineering	9–11 Nov. 2023.
4	One-week online FDP on: Enhancing Faculty Expertise: Communication and Signal/Image Processing	Aditya College of Engineering & Technology, Kakinada	10–15 Jul. 2023.
5	Two-day online workshop on: 5G NOMA Communications	CVR College of Engineering, Hyderabad	12–13 Aug. 2022.
6	ATAL FDP on: Artificial Intelligence & Machine Learning	University Institute of Technology, Rajiv Gandhi Proudyogiki Vishwavidyalaya	25–29 Oct. 2021.
7	E&ICT-sponsored one-week STTP on: Advances in Practical RF Antenna Design	NIT Warangal and Sree Vidyanikethan Engineering College	25–30 Nov. 2019.
8	AICTE-sponsored one-week STTP on: Challenges and Research Avenues in Signal and Image Processing	Sree Vidyanikethan Engineering College	11–16 Nov. 2019.
9	QIP-sponsored one-week STTP on: Recent Trends in Microwave/Millimeter-Wave Technology and Applications in Wireless Communication and Defence	IIT (BHU), Varanasi	14–19 Oct. 2019.
10	AICTE-sponsored one-week STTP on: Recent Trends and Research Challenges on Nano CMOS VLSI by Industry-Standard EDA Tools	Sree Vidyanikethan Engineering College	26–31 Aug. 2019.

11	CSIR-sponsored national workshop on: VLSI Architectures for Biomedical Image Processing Applications	Sree Vidyanikethan Engineering College	8–9 Aug. 2019.
12	National-level workshop on NPTEL	Sree Vidyanikethan Engineering College	11 Jan. 2019.
13	Three-day FDP on: Object Detection & Recognition using Deep Learning Techniques	Sree Vidyanikethan Engineering College	20–22 Dec. 2018.
14	ISRO-sponsored course on: Hyperspectral Remote Sensing and its Applications	Department of Space, ISRO	19 Feb.–13 Mar. 2018.
15	Two-day FDP on: Antenna Design and Simulation using FEKO EM Simulation Tools	Sree Vidyanikethan Engineering College	19–20 Jan. 2018.
16	AICTE-sponsored national seminar on: Research Issues on Nanoparticles and Nano-Biosensors in Agriculture	Sree Vidyanikethan Engineering College	24–25 Nov. 2017.
17	AICTE-QIP short-term course on: 5G mmWave Radio Transmission for Ultra-High-Speed Wireless Technologies	Pondicherry Engineering College	13–17 Nov. 2017.
18	FDP on: Project-Based Learning with MATLAB	Sree Vidyanikethan Engineering College	12 Oct. 2017.
19	One-week FDP on: Teaching, Learning & Research	Sree Vidyanikethan Engineering College	20–24 Jun. 2017.
20	TEQIP-sponsored workshop on: PIC and ARM Microcontrollers	Sree Vidyanikethan Engineering College	27–28 Dec. 2016.
21	TEQIP-II short-term course on: Entrepreneurship—Promoting Innovations and Business Ventures	Pondicherry Engineering College	17–22 Oct. 2016.
22	TEQIP-II short-term course on: Recent Advances in Short-Range Wireless Communications	IIT Kharagpur	11–15 Jul. 2016.
23	TEQIP-II STTP on: Bio Signal Processing for Telemedicine Applications	Pondicherry Engineering College	27 Jun.–2 Jul. 2016.
24	TEQIP-sponsored STTP on: Recent Advances in Process Modelling, Control and Optimization Techniques	Pondicherry Engineering College	13–18 Jun. 2016.
25	Conference tutorial on: Software Defined Radio	by National Instruments, ICCS 2016, Pondicherry Engineering College	18 Mar. 2016.

26	TEQIP-sponsored workshop on: Parallel Computing with GPUs	IIT Bombay / Pondicherry Engineering College	12 Mar. 2016.
27	TEQIP-II, NPIU-sponsored STTP on: Recent Trends in Optimization Techniques	Pondicherry Engineering College	4–9 Jan. 2016.
28	AICTE-QIP STC on: Recent Trends in Development of Communications: Cognitive Networks	Pondicherry Engineering College	30 Nov.–4 Dec. 2015.
29	One-day course on Mendeley software	Pondicherry Engineering College	5 Oct. 2015.
30	Eight-day FDP on: VLSI Design using NI Hardware and Software	ICT Training Academy / Pondicherry Engineering College	22 Sep.–1 Oct. 2015.
31	Two-day workshop on: Next Generation Networks: 4G and Beyond	SRM University, Chennai	10–11 Sep. 2015.
32	JTG Summer School Workshop	Indian Institute of Science, Bengaluru	24 Jul. 2015.
33	JTG Summer School on Information Theory	Indian Institute of Science, Bengaluru	20–23 Jul. 2015.
34	Short-term course on: Design & Analysis of Efficient Antennas for Wireless Communications	IIT Kharagpur	25–30 May 2015.
35	Hands-on training on TMS320C6745 digital signal processor	Pondicherry Engineering College	27–28 Apr. 2015.
36	Knowledge-sharing session on: How to Write a Technical Paper for Reputed Journals	Kongu Engineering College	28 Mar. 2015.
37	International Workshop on Intelligent Data Analysis Techniques (IWIDAT 2015)	Pondicherry Central University	17 Mar. 2015.

Awards/Recognitions/Achievements

S.No.	Name of the Award	Awarding body/Society/Organization	Year
1	AICTE Industry Fellow	Selected for the fellowship at Garuda Aerospace, Chennai	2026
2	Best Teacher Award	Bapatla Engineering College	2023–24
3	Best Teacher Award	Bapatla Engineering College	2020–21
4	Young Research Award	Institute of Scholars	2020–21
5	GATE Qualification	Qualified Graduate Aptitude Test in Engineering	2011

6	Best Project Award	TECHNOSAUR-09, ISTE-sponsored national-level project exhibition, MIC College of Technology, Vijayawada	2009

Details of Project Proposals Submitted/Sanctioned/Completed

S. No.	Title of the Project	Funding body	Submitted/ Sanctioned/ Completed	Amount	Year/ duration
1	Development of a 6G-Compatible, Self-Healing UAV Mesh Network Architecture with Ultra-Low Latency Using Hardware-Accelerated FPGA Pipelines and AI-Driven Predictive Routing	ANRF - MAHA Drones	Submitted	₹4.85 Crores	3 Years
2	Intelligent Multi-Sensor UAV for Real-Time Fire Detection, Tracking & Threat Assessment	iDEX Open Challenge	In Progress	₹37,40,500	-

Consultancy Contribution

S.No.	Year	Amount	Details
NIL			

Student Project/Research Guidance

S.No	Level	Total number
1	UG	Completed: 20 Ongoing: 1
2	PG	Completed: 2 Ongoing: 0
3	PhD	Completed: 0 Ongoing: 0

Administrative Experience

S.No.	Role	Duration (From – to)
1	NBA Coordinator	2022-2026
2	IQAC Coordinator	2022-2024
3	NBA C-10 College level Coordinator	2023-2024
4	Admission Coordinator	2020-2021
5	Time-Table Coordinator	2017-2020

Research Credentials	
Index/database	**ID/Link**
Google Scholar	https://scholar.google.com/citations?user=K02Ua0EAAAAJ&hl=en
SCOPUS	https://www.scopus.com/authid/detail.uri?authorId=57212171851
Web of Science	https:// researchid.co/pavan4790
Vidwan ID	https://vidwan.inflibnet.ac.in/profile/323974
ORCID ID	https://orcid.org/0000-0002-4354-4185

Any other relevant information

- Acting as a **BoS Member** for the Department of ECE, Chirala Engineering College.
- Invited academic outreach: **09** expert/guest/resource-person/technical talks listed during 2018-2026.
- Editorial/Review service includes editor roles, conference program committee/reviewer roles, and reviewing for Materials Today: Proceedings and Measurement: Sensors.
- **Research Datasets:** SCIMB-17/SCIMD-17, Indian Traffic VQA Dataset, and Number Plate Number Identification Dataset.
- Certifications include DGCA Remote Pilot Certification (Apr. 2026), NPTEL Deep Learning (IIT Ropar, 2025), NPTEL Accreditation and Outcome- Based Learning (IIT Kharagpur, 2023), Advanced Python, Data Structures & Algorithms using Python, and AI for Everyone.
- External examiner for laboratory examinations at RVR & JC College of Engineering, P. V. P. Siddhartha College of Engineering and V. R. Siddhartha Engineering College.
- Professional memberships:
  Institute of Scholars (InSc20210312)
  IAENG (ID: 137700)
  SDIWC (ID: 14250)



Dr. Ch. V.M.S.N. Pavan Kumar
24/08/2026