



## **Dr. Vamsidhar Anagani**

### **Associate Professor**

**Department of Electronics & communication Engineering**

**Raghu Engineering College, Visakhapatnam - 531162,**

**Andhra Pradesh, INDIA**

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**Interests:** Wireless Communication; Signal Processing; Image Processing; Machine Learning; Advanced Digital System Design.

### **Course Taught Previously**

#### **PG.**

- Transform Techniques
- Mobile Communications

#### **UG.**

- Electronic Devices and Circuits
- Electronic Circuit Analysis
- Signals & Systems
- Electromagnetic Waves and Transmission Lines
- Probability Theory and Stochastic Process
- Pulse & Digital Circuits
- Switching Theory and Logic Design
- Digital Integrated Circuit Applications
- Digital Signal Processing
- Digital Image Processing
- Analog & Digital Communications
- Cellular and Mobile Communications
- Optical Fiber Communications
- VLSI Design
- Satellite Communications
- Microwave Engineering

#### **Laboratories Handled**

- Electronic Devices and Circuits Lab
- Electronic Circuit Analysis Lab
- Pulse & Digital Circuits Lab
- Digital Electronics Lab
- Digital Integrated Circuit Applications Lab
- Digital Signal Processing Lab.
- Analog Communications Lab
- Digital Communications Lab
- Microwave Engineering & Optical Fiber Communications Lab

## **Publications**

### **International Journals**

1. "An Automated Facemask Detection for Covid-19 using Voila-Jones Algorithm", *Journal of Pharmaceutical Negative Results*, Vol.13, Special Issue 9, pp. 5392-5403, Oct 2022. (Scopus Indexing)
2. "An Effective and Portable IoT based Air Pollution Monitoring System", *The Seybold Report*, Vol.17, No.10, pp. 998-1007, Oct 2022. (Scopus Indexing)
3. "A Comparison of Optimal RRNOMA and OMA in a Paradigm Shift of Emerging Technologies using Deep Learning Analysis", *Mathematical Statistician and Engineering Applications*, Vol.71, No.4, pp. 1168-1182, Aug 2022. (Scopus Indexing)
4. "Machine Learning Application for Smartphone Captured Iris Recognition using Image Embedding for Feature Extraction", *NeuroQuantology*, Vol.20, No.8, pp. 6980-6992, Aug 2022. (Scopus Indexing)
5. "Performance Analysis of Coarse Quantization for Multiuser MIMO OFDM Systems", *Telematique*, Vol. 21, Issue 1, pp. 2746-2760, Aug 2022. (ESCI-Web of Science indexing)
6. "Speech Enhancement for Hearing Aid People", *Mukt Shabd Journal*, Vol. 10, Issue 1, pp.972-976, January 2021. (UGC-Care I indexing)
7. "Deep Learning Model for ECG classification to identify cardiovascular diseases", *Journal of Xi'an University of Architecture and Technology*, Vol. 12, Issue 8, pp.1492-1496, Aug 2020. (Scopus Indexing)
8. "Event evoked bio-signal classification using Hilbert transform for Brain Computer Interface", *International Journal of Management, Technology and Engineering*, Vol. 9, Issue 4, pp.5806-5817, Aug 2019. (UGC-Care I indexing)
9. "Evaluation of Various Methods for channel estimation in Multicell Multiuser Discrete Wavelet MIMO OFDM Systems", *International Journal of Management, Technology and Engineering*, Volume 8, Issue 12, pp. 5806-5817, December 2018. (UGC-Care I indexing)
10. "A Hybrid PSO with Multilayer Perceptron for EEG Classification", *International Journal of Management, Technology and Engineering*, Vol. 8, Issue 12, pp. 5797-5805, Dec. 2018. (UGC-Care I indexing)

11. "Analysis and Design of LDPC coded Multiuser Discrete Wavelet based MIMO-OFDM Systems", *International Journal of Latest Engineering and Management Research*, Volume 2, Issue 10, pp. 58-69, October 2017.
12. "Analysis and Design of H-infinity channel estimation in Multicell multiuser discrete wavelet-based MIMO-OFDM systems", *International Journal of Current Engineering and Scientific Research*, Volume 4, Issue 9, pp. 31-37, October 2017.
13. "Advanced automated Blood Bank using Raspberry Pi", *International Journal of Technical & Scientific Research*, Volume 6, Issue 2, pp. 286-289, July 2017.
14. "Performance Comparison of DWT and FFT Based Multiuser MIMO-OFDM PAPR Reduction by Residue Number System", *International Journal of Wireless Networks and Communications*, Volume 9, Issue 1, pp. 21-33, May 2017.
15. "A Heuristic Approach of Frequency and Power Allocation for Energy Efficient OFDM Communication Systems with Low Error Rate", *International Journal of Technical and Scientific Research*, ISSN: 2319-9245, Volume 6, Issue 2, pp. 220-222, November 2016.
16. "A Pioneering Perusal of MIMO-OFDM Realy Guesstimate Disposition", *IOSR Journal of Electronics and Communication Engineering*, Volume 11, Issue 4, Ver. III, pp. 50-55, July-August 2016.
17. "A Novel Approach on Matching Algorithms", *IOSR Journal of Electronics and Communication Engineering*, Volume 11, Issue 2, Ver. I, pp.36-41, Mar- Apr 2016.
18. "Performance Comparison of FFT and DWT based MIMO-OFDM Communication Systems", *International Journal of Modern Trends in Engineering and Research (IJMTER)*, Volume 03, Issue 02. pp. 204-210, Feb 2016.
19. "PAPR analysis using Artificial Bee Colony algorithm in MIMO-OFDM Systems", *International Journal for Research & Development in Technology*, Volume 4, Issue 4, pp. 24-30, October 2015.
20. "Analysis of Multipath Fading Profile Provision in Multiple Access System Grids", *IOSR Journal of Electronics and Communication Engineering*, Volume 10, Issue 5, Ver. I, pp.1-8, Sep - Oct 2015.
21. "Finger Print Based Door Locking System", *International Journal of Engineering and Computer Science*, Volume 4, Issue 3, pp.10810-80814, March 2015.
22. "Low Memory Low Complexity Image Compression Using HS-SPIHT Encoder", *International Journal of Engineering Research and Applications*, Volume 4, Issue 11(Version-6), pp. 69-82, November 2014.
23. "An Efficient Implementation of Generalized DFT Filter Banks for Sub-band Decomposition", *International Journal of Engineering Research & Technology*, Volume 1, Issue 8, October 2014.

24. "PAPR Reduction in Multi-User MIMO-OFDM", *Progress in science and Engineering Research Journal*, Volume 2, Issue 5/6, September 2014.
25. "Enhanced MMSE based Channel Estimation Technique for MU-MIMO OFDM Systems", *Progress in science and Engineering Research Journal*, Volume 2, Issue 5/6, September 2014.
26. "Optimization of Oil Recovery Process Using Advanced Process Control Functions", *International Journal of Scientific Research Engineering & Technology*, Volume 3 Issue 2, pp.183-187, May 2014.
27. "An Enhanced Approach for Low Bit Rate Image Compression Using Autoregressive Modeling", *IOSR Journal of VLSI and Signal Processing*, Volume 3, Issue 5, pp. 43-49, Nov–Dec 2013.
28. "Comparison of PAPR of OFDM Systems using CDF Plots for Different Modulation Schemes under AWGN Channel", *International Journal of Engineering and Innovative Applications*, Volume 1, Issue 3, pp. 649-658, November 2012.
29. "Nonlinear Channel Characterization in OFDM Systems Using Signals with Spectral Notches", *International Journal of Engineering Research and Development*, Volume 3, Issue 9, pp. 46-52, September 2012.
30. "Congestion Avoidance in IP Based CDMA Radio Access Network (RAN) through Router Control", *IOSR Journal of VLSI and Signal Processing*, Volume 1, Issue 2, pp. 53-60, October 2012.

## **Conference Proceedings**

1. "A Birdsong denoising using Cascaded Combination of Phase Spectrum Compensation and Wavelets", *IEEE International Conference on Computing, Communication and Power Technology*, jointly organized by Raghu Educational Society & IEEE Vizag Bay section Visakhapatnam, during 7-8 Jan, 2022. ([Scopus Indexing](#))
2. "Image Enhancement using Chicken Swarm Optimization", *Springer International Conference on Computational Intelligence & Sustainable Technologies* jointly organized by NIT Silchar & NIT Sikkim during October 28-30, 2021. ([ESCI-Web of Science indexing](#))
3. "A New Approach to Performance Analysis of Discrete Wavelet based Multiuser MIMO-OFDM for BPSK Modulation Scheme", *Springer 2<sup>nd</sup> International Conference on Micro-Electronics, Electromagnetics and Telecommunications* at Raghu Educational Society, Visakhapatnam, India during 6-7 Jan, 2017. ([Scopus indexing](#))
4. "Analysis of MSE & SNR of MIMO-OFDM tactics in Adaptive channel estimation", *IEEE International conference on Advanced Communication, Control and Computing Technologies (ICACCCT)* at Syed Ammal Engineering College, Ramanthapuram, Tamilnadu during 8-10 May, 2014. ([Scopus indexing](#))
5. "Neural Network based Partial Parallel Interference Cancellation Multiuser Detection using Hebb Learning Rule"- *National Conference on*

*Advanced Communication & Computer Technologies (ACCT)* organized by IETE Visakhapatnam Centre on July 6-7, 2012.

6. "Performance Evaluation of blind methods for Multiuser detection", *National Conference on advances in Signal Processing (NCASP-09)* organized by Dept. of ECE, Andhra University, Blekinge Institute of Technology, Sweden and IETE Visakhapatnam Centre on November 20-21, 2009.
7. "Indian MST radar observations for complementary code sequences", *National Conference on advances in Signal Processing (NCASP-09)* organized by Dept. of ECE, Andhra University, Blekinge Institute of Technology, Sweden and IETE Visakhapatnam Centre, on November 20-21, 2009.
8. "Performance Comparison of Wiener Filter and CLS Filter on 2D signals", *IEEE Sixth International Conference on Information Technology: New Generations (ITNG-09)*, April 27-29, Los Vegas 2009. (Scopus indexing)

### **PHDs Supervised**

Name of Student	Area of Research	Remarks *
Nil		

### **Workshops/Conferences/Seminars/Symposiums organised** **Conferences/Symposiums**

S. No	Name of the Programme	Dates	Sponsored by	Role
1.	Elsevier's International Conference on Advanced Material Technologies (ICAMT-2016)	Dec 27-28, 2016	DIET, Anakapalle	Technical Convener
2.	International Conference on Computing, Communication and Power Technology (IC3P)	Jan 7-8, 2022	REC & RIT, Visakhapatnam	Organizing Member

### **Seminars, Workshops and STTPs**

S. No	Name of the Programme	Dates	Sponsored by	Role
1.	A one-day International Workshop "Advances in Wireless Communications and	June 12, 2023	RIT IEEE Student Chapter	Organizing Member

	Antenna Technologies for Space, Vehicular and Ground Applications”			
2.	A Two day Workshop “PCB Designing”	March 9-10, 2023	RIT IETE Students’ Forum	Convener
3.	A Six Day National Workshop “NI LabView-Engineering and Technology Practices”	July 4-9, 2016	DIET IEEE Student Chapter	Convener
4.	A Two-Day National Workshop “Advanced Antenna Technology”	Sept 22-23, 2015	DIET IEEE Student Chapter	Convener
5.	A One Day National Workshop “Engineering Applications of MATLAB and Embedded C”	April 24, 2015	DIET IEEE Student Chapter	Convener
6.	A Two-Day National Workshop “CANSAT Leadership Training Program”	Dec 4-5, 2014	IET (UK) Chennai-YPS Network and IETE Visakhapatnam Centre	Convener
7.	A Two-day National Level Workshop “Web Design”	July 21-22, 2014	IET (UK) Chennai-YPS Network	Convener
8.	A Two-Day National Level Workshop “Robotics-2K14”	Mar 14-15, 2014	IETE Visakhapatnam Centre	Coordinator

**Visit to outside institute/organization:**

S. No	Inst. /Organization visited	Purpose of visit
1.	Syed Ammal Engineering College, Tamilnadu, during 8-10 May, 2014	For presenting paper in IEEE International conference on Advanced Communication, Control and Computing Technologies
2.	Andhra University, Visakhapatnam during 20-21 November, 2009.	For presenting paper in National Conference on advances in Signal Processing
3.	Gayatri Vidya Parishad College of Engineering for Women, Visakhapatnam during 3-5 January 2022.	Three-day Workshop on “Recent Trends in Radar Signal Processing”
4.	Bharat Sanchar Nigam	Workshop on “Next Generation

	Limited (BSNL), Visakhapatnam on 5 <sup>th</sup> May 2011	Internet Protocol-The Challenges Ahead”
5.	Siksha ‘O’ Anusandhan University, Bhubaneswar from 20-21 March 2010.	Workshop on “Swarm Intelligence: Theory and Applications”
6.	Anil Neerukonda Institute of Technology and Sciences, Visakhapatnam during 2-4 September 2006	Workshop on “Advanced VLSI Design and Embedded Systems”
7.	National Institute of Technology, Warangal during 10-12 August 2005	Workshop on “Microwave Measurements”
8.	MVGR College of Engineering, Visakhapatnam during 12-13 March, 2005	Workshop on “Latest Technologies in Electronic Communication”

### **Continuing Education / QIP Short Term Lectures / Special Lectures given:**

S. No.	Title of Lecture / Lecture Series	Place
Nil		

### **Details of professional training and research experience**

S.No.	Title of the Course	Place	Year	Duration
1.	Advances in Practical Antenna Design	Raghu Engineering College, Visakhapatnam	2017	1 week
2.	Signal Processing and Communications Systems	GVP College of Engineering for Women, Visakhapatnam	2017	3 days
3.	5G Wireless Communications organized by the E&ICT Academy, NIT Warangal	Anil Neerukonda Institute of Technology and Sciences, Visakhapatnam	2018	1 week
4.	OBE-NBA Process	Narasaraopeta Engineering College, Narasaraopet	2020	5 days
5.	Teaching, Learning, and Assessment Strategies	IEEE Hyderabad Section	2020	1 week
6.	Opportunities &	Vivekanand	2020	1 week

	Challenges Electronics & Allied Industries in India post COVID-19	Education Society's Institute of Technology, Mumbai		
7.	Recent Trends & Innovations in Digital Forensic	AISSMS Institute of Information Technology, Pune	2020	1 week
8.	Image Processing and Computer Vision (IPCV)	Anil Neerukonda Institute of Technology and Sciences, Visakhapatnam	2020	3 days
9.	Multicarrier Modulation in Broadband Communication and Technology Challenges in 5G	Raghu Engineering College, Visakhapatnam	2017	2 days
10.	Electric Vehicles	Vidya Jyothi Institute of Technology, Hyderabad	2020	5 days
11.	Technological Advances in Wireless Communication Systems	Aditya Institute of Technology and Management (AITAM), Tekkali	2020	1 week
12.	Trends in Electronics & Communication Engineering	Sri Vasavi Engineering College, Tadepalligudem	2020	5 days
13.	Disruptive Technologies in Electronics & Communications	Vidya Jyothi Institute of Technology, Hyderabad	2020	1 week
14.	Deep Learning Algorithms for Computer Vision Applications: An Industry Perspective	Baba Institute of Technology and Sciences, Visakhapatnam	2020	1 day
15.	Outcome Based Education	Kallam Haranadha Reddy Institute of Technology, Guntur	2021	1 week
16.	Recent Advances in Signal Processing	Jawaharlal Nehru Technological University, Kakinada	2021	5 days
17.	Recent Advances in IoT and Machine Learning: Application and Hands-on	Raghu Engineering College, Visakhapatnam	2021	3 days
18.	Innovative Mechanisms	KL University, Guntur	2022	2 days

	and Standards for Assuring Quality in HEIs			
19.	Communication Systems using Machine Learning Algorithms	Annamacharya Institute of Technology and Sciences, Hyderabad	2022	1 week
20.	Machine Learning in Real Time Embedded & IOT Applications	MeitY, Govt. of India, organized by E&ICT Academy, NIT Warangal	2022	40 hours
21.	Artificial Intelligence, Machine Learning and Deep Learning with Matlab and Simulink	Raghu Engineering College, Visakhapatnam	2022	3 days
22.	Optical Wireless Communications for Beyond 5G Networks and IoT	NPTEL-AICTE	2023	12 weeks

### **Projects Sponsored R & D, Consultancy Projects:**

S. No	Title of Project	Funding Agency	Financial Outlay	Project Period	Project Status
Nil					

### **Awards and Honors**

1. **Best Academician Award - 2022** from **IJIEMR-Elsevier SSRN Research Awards** in recognition of the contributions to academics in the field of Electronics & Communication Engineering.

### **Additional Responsibility**

#### **RESPONSIBILITIES WITHIN THE INSTITUTE:**

1. In-charge HOD, II Years, REC, Visakhapatnam
2. Student Counsellor for IETE Student Forum (ISF) at RIT, Visakhapatnam
3. Member of Academic Planning and Monitoring Committee, REC, Visakhapatnam
4. NBA Central coordinator for 2021-22 accreditation process at REC, Visakhapatnam
5. Member of IQAC Committee during 2018-21, REC, Visakhapatnam
6. Member of Board of Studies, ECE department, REC, Visakhapatnam

#### **POSITIONS HELD OUTSIDE THE INSTITUTE:**

1. Executive Member – IETE Visakhapatnam Centre, for three Years (2022-25)

2. Member of Reviewer Board, Periodica Polytechnica Electrical Engineering and Computer Science (Scopus Journal)
3. Reviewer for International Conference on Recent Trends in Microelectronics, Automation, Computing and Communications Systems (ICMACC-22)
4. Member of College Academic Committee at DIET, Anakapalle
5. HOD, ECE for three years from 19/01/2014 to 20/09/2016 at DIET, Anakapalle
6. Incharge HOD, ECE for **seven** years from 18/06/2007 to 18/01/2014 at DIET, Anakapalle.
7. NBA/NAAC coordinator for two years (2010-12) at DIET, Anakapalle
8. Student Counsellor for IETE Student Forum (ISF) at DIET, Anakapalle for eight years.
9. Student Counsellor for IEEE Student Chapter at DIET, Anakapalle for Two years.
10. Editor for DIET IEEE Signal Processing Society-Student Branch News letter
11. HoD, ECE Department, VITAM, Visakhapatnam for a period of **one year** during 2006-07.

#### **PROFESSIONAL MEMBERSHIPS:**

1. Fellow of the Institution of Electronics and Telecommunication Engineers (F-209746)
2. Life Senior Member of Wireless, Antenna and Microwave Symposium (WAMS) Society (3014)
3. Life Member of Indian Society for Technical Education (LM75503)
4. Life Member of Indian Science Congress Association (L17166)
5. Life Member of Society of EMC Engineers (India) (LM-1103)
6. Fellow of Indian Society of Electronics & Communication Engineers (F/2509/11)
7. Member of Institute of Electrical and Electronics Engineers, Inc (80745838)
8. Life Member of The Institution of Engineers (M-1717744)
9. Life Member of The Society for Learning Technologies (LM361)
10. Member of International Association of Engineers (121558)