FACULTY PROFILE

Dr. ANANDA BABU T

Ph.D (CSIR Fellow), FIETE, MIEEE, MIAENG
E-Mail : anand.mits11@gmail.com

Address for Communication:

Padmavathi Heights, Near Police Ramalayam,
Sukarlabad, Machilipatnam, Andhra Pradesh – 521001

Academic Qualifications

S. No	Name of the Degree	University	Percentage of Marks/Grade	Specialization
1	Ph. D	Andhra University	CSIR Fellow	Signal Processing
2	M. Tech	Swarnandhra College of Engineering & Technology	73.07	VLSI System Design
3	B. Tech	RVR & JC College of Engineering	70.56	E.C.E
4	Intermediate	Board of Intermediate Education, AP	94.4	M.P.C
5	SSC	Board of Secondary Education, AP	87.83	-

Professional Experience: 13 Years (till Jan 2025)

S. No.	Designation	Institution Name	Working Period	
			From	To
1	Assistant Professor	Seshadri Rao Gudlavalleru Engineering College	18-11-2019	Till date
2	Assistant Professor (c)	Andhra University	08-01-2015	16-11-2019
3	Assistant Professor	Rao & Naidu Engineering College	25-05-2013	31-12-2014
4	Assistant Professor	Majhighariani Institute of Technology & Science	24-09-2011	24-05-2013

Academic Rewards / Achievements:

- ✓ Awarded Research Fellowship through CSIR-UGC NET, Dec 2012.
- ✓ Qualified GATE – 2013 in Electronics & Communication Engineering (EC).
- ✓ Topper in the NPTEL subject Digital Image Processing with 91% (Elite + Gold)
- ✓ Achieved top 1% for the subject System Design through Verilog with 92% (Elite + Gold)
- ✓ Certified with Elite + Silver for Signals & Systems (85%) and Introduction to Machine Learning (73%)
- ✓ Secured 3rd place in intermediate marks for Sri Nagabhairava Junior College in 2002.
- ✓ Stood Mandal (Pedanandipadu) first in SSC 1999-2000.
- ✓ Got first prize in District Science-Fair in 1999-2000 (Guntur).

Professional Body Membership

S. No.	Name of the Professional body	Membership	Number
1	Institute of Electrical and Electronics Engineers (IEEE)	Member	M-95031695
2	Institute of Electronics & Telecommunication Engineers (IETE)	Fellow	F-503561
3	International Association of Engineers (IAENG)	Member	247472

Academic Identity:

- Scopus Id: **57202044867**
  https://www.scopus.com/authid/detail.uri?authorId=57202044867
- ORCID Id: 0000-0001-5823-9709 (https://orcid.org/0000-0001-5823-9709)
- Vidwan-ID : 197773 (https://vidwan.inflibnet.ac.in/profile/197773)
- Web of Science Researcher ID: ABD-7153-2020
  https://www.webofscience.com/wos/author/record/ABD-7153-2020
- Research Gate: https://www.researchgate.net/profile/Dr-Babu-T
- Google Scholar: https://scholar.google.com/citations?user=gubzZ28AAAAJ&hl=en

Papers Published in Journals No. : 16 (SCI-3, Scopus-7)

1. "A 4.9 GS/s Strong ARM Latch Comparator Topology with Offset Correction in 32-nm", Analog Integrated Circuits and Signal Processing, Springer Nature (**SCI**) (Under Review).

2. "Auto-Calibrated Offset Suppression-Based Dual-Mode Sense Amplifier for Enhanced Performance in SRAM Read Circuits", Circuits, Systems & Signal Processing (CSSP) (**SCI**) (Under Review).

3. Dr. Ch. Rambabu, Dr D. Krishna, Dr Sk Ebraheem Khaleelullla, Dr. B. Vamsy Krishna, V. Murali Krishna, **Dr Ananda Babu T**. (2025). "Analysis of Cognitive Abilities in Students using Feature Optimization on EEG Signals". South Eastern European Journal of Public Health, 1170–1178. https://doi.org/10.70135/seejph.vi.3976 (**Scopus**).

4. **Dr Ananda Babu T "**Enhancing Uterine Monitoring: Feature Selection and Classification Methods for Labor Assessment using Magnetomyography Signals**"** accepted for publish in *AIP conference proceeding* (**Scopus**)

5. **Dr. T. Ananda Babu**, "Speckle Noise Reduction in SAR Images using AMOSDS Optimization with Multidimensional Transforms" The International journal of analytical and experimental modal analysis, Volume XVI, Issue 09, September 2024,

6. **Dr. T Ananda Babu**, "Machine Learning Approach to Parkinson's Disease Classification using Electroencephalography Signals", Technische Sicherheit, 24(4):207-210, 2024, DOI:22.8342.TSJ.2024.V24.4.01400 (**Scopus**).

7. **Dr. T Ananda Babu**, "Classification of Electrocardiograms using Deep Learning Techniques for the Prediction of COVID-19", Journal of Emerging Technologies and Innovative Research (JETIR), Volume 10, Issue 4, April 2023, ISSN-2349-5162.

8. **Dr. T Ananda Babu**, KV Venkateswara Rao, Y Mamillu, "Classification of Mental Stress during Public Speaking using Electroencephalography Signals" Journal of Huazhong University of Science and Technology, 2021, Vol. 50, Issue 7 (**Scopus**).

9. **Dr. T Ananda Babu**, "Compression of Uterine MMG Signals using the DCT and the Huffman Coding", International Journal of Analytical and Experimental Modal Analysis, Vol. XII, Issue VIII, August-2020 (UGC Care List).

10. **T Ananda Babu**, Dr. P Rajesh Kumar, "Optimized Feature Selection for the Classification of Uterine Magnetomyography Signals for the Detection of Term Delivery", Biomedical Signal Processing and Control, Elsevier 58(58): 101880: DOI: 10.1016/j.bspc.2020.101880 (**SCIE**).

11. **T Ananda Babu**, Dr. P Rajesh Kumar, "Feature Selection Algorithms to Classify Multichannel Uterine Magnetomyography Signals", Journal of Advanced Research in Dynamical and Control Systems 11(18):211-219 (**Scopus**).

12. **T Ananda Babu**, Dr. P Rajesh Kumar, "Classification of Magnetomyography Signals using Discrete Wavelet Transform and Genetic Algorithm", Journal of Emerging

Technologies and Innovative Research (www.jetir.org), ISSN:2349-5162, Vol.6, Issue 5, pp.563-568, May-2019, (UGC Approved).

13. **Ananda Babu T**, & P Rajesh Kumar, Dr., "Comparison of different feature extraction methods for the analysis of uterine magnetomyography signals to predict term labor", International Journal of Engineering & Technology, 7(3.29), 1-7. Doi: http://dx.doi.org/10.14419/ijet.v7i3.29. 18449. (**Scopus**).

14. **T Ananda Babu**, Dr. P Rajesh Kumar, "Features Extraction and Classification of Uterine Magnetomyography Signals", International Journal of Current Engineering and Scientific Research, Volume 5, Issue 3-2018. (UGC Approved).

15. **T Ananda Babu**, Dr. P Rajesh Kumar. "Separation of Uterine MMG Records of Term . Pregnancies using Linear and Nonlinear Features", International Journal of Pure and Applied Mathematics, special issue, Volume 118 No. 9, 2018, 697-702. (**Scopus**).

16. "Performance analysis of ischemic stroke using soft computing techniques", International Journal of Computer Science, Information and Engg. Technologies (IJCSIET), Vol. 3, Issue 4, 2014 ISSN 2277-4408.

Book Chapters: 03

1) Krishna Dharavathu, **T. Anand Babu**, "Encipher Image Transmission Through MIMO System with Rayleigh Fading Environment Using AES Encryption Algorithm" in book *Advances in Computational Intelligence and Its Applications*, 2024, CRC Press, ISBN9781003488682.
2) **Dr. T Ananda Babu**, Y Mamillu, Dr. S. Ravi, Dr. P Rajesh Kumar, "Analysis of Mental Stress during Public Speaking using Feature Optimization Techniques on EEG Signals" in Book *Human-Machine Interface Technology Advancements and Applications* published by CRC Press of Taylor & Francis, 2023, eBook ISBN-9781003326830.
3) **Ananda Babu T**, & P Rajesh Kumar, Dr "Prediction of Term Labor using Wavelet Analysis of Uterine Magnetomyography Signals", Lecture Notes on Data Engineering and Communication Technologies, vol. 28. Springer, Singapore pp 29-37, https://doi.org/10.1007/978-981-13-6459-4_4.

Papers Published in Conferences No. : 06

1) "Detection of Term Delivery using Discrete Wavelet Transform and Feature Selection Methods on Uterine Magnetomyography Signals ", 2nd International Conference on Computational and Intelligent Techniques for Automation of Engineering Systems (CITAES'22), SR Gudlavalleru Engineering College, India during July 29 – 30, 2022.

2) "Analysis of Mental Task ability in Students based on Elecroencephalography Signals" 2022 IEEE International Conference on Signal Processing, Informatics, Communication and Energy Systems (SPICES), 2022, pp. 274-278, doi: 10.1109/SPICES52834.2022.9774092 (**IEEE Xplore)**.

3) "Identification Epilepsy using Discrete Wavelet Transform and Random Subspace Techniques" Proceedings of 2nd International Conference on Communication Systems NCOCS-2020, NIT Puducherry, November 2020.

4) "Characterization and classification of uterine magnetomyography signals using KNN classifier", 2018 Conference on Signal Processing and Communication Engineering Systems (SPACES), Vijayawada, 2018, pp. 163-166. Doi: 10.1109/SPACES.2018.8316337. (**IEEE Xplore**).

5) "An Ad-hoc Networking for Android Mobiles", NSAICT, Berhampur University, Berhampur, Feb 2013.

6) "Design and Simulation of FFT Processor for OFDMA System using FPGA", International Conference on Recent Trends in Engineering & Technology, Guntur, Sep 2012.

Patents:

Grant:

1. Title of the invention**: "Machine learning based Heart Health monitoring device".** Design no: 423159-001, Date: 13/07/2024.

Publication:

1. Title of the invention: "**Efficient Transmission of an Encrypted Image through a MIMO-OFDM System using Rubik's Cube Encryption Algorithm**", Application No.202241069778A, Publication Date: 30/12/2022.
2. Title of the invention: "**Integrated Alert System with Wireless Network and Method Thereof**", Application No.202241051267A, Publication Date: 08/09/2022

R&D and Consultancy:

In-House:

1) A project titled "Cattle Tracking and Sound Classification to monitor and Diagnose its Health Conditions" was sanctioned in January 2023 for an amount of Rs. 26,156/-.

External:

1. Core Research Grant (CRG) titled “Effective stress management of Faculty and Students in Education Environments using Electrocardiography Signals and Internet of Things” applied to Science & Engineering Research Board (SERB) with project’s file no. CRG/2022/007889 for amount 22.74 Lakhs.
2. Strart-up Research Grant (SRG) titled “Real-time Recognition of Students’ Concentration during Online Learning using Electroencephalography Signals” applied to Science & Engineering Research Board (SERB) with project’s file no. SRG/2021/000494 for amount 14.81 Lakhs.
3. Core Research Grant (CRG) titled “Real-time Recognition of Faculty Stress during Online teaching using Electroencephalography Signals for Effective Stress Management” applied to Science & Engineering Research Board (SERB) with project’s file no. CRG/2021/000884 for amount 24.46 Lakhs.

Reviewer of Journals/ Conferences:

1) “Bio-cybernetics and Biomedical Engineering” An International Journal indexed in Science Citation Index Expanded, Scopus with 16.5 CiteScore and 5.3 Impact Factor ISSN: 2391-467X
2) “Expert Systems with Applications”, An International Journal indexed in Science Citation Index Expanded, Scopus and Web of Science with impact factor 8.665.
3) “International Conference on Recent Advances in Communication and Electronics (ICRACE-2023)” organized by Department of ECE, PBR Visvodaya Institute of Technology and Science, Kavali, Andhra Pradesh, India during June 24, 2023.
4) “The Second International Conference on Computational and Intelligent Techniques for Automation of Engineering Systems (CITAES’22)” organized by the Department of Electronics and Communication Engineering, Seshadri Rao Gudlavalleru Engineering College, Gudlavalleru, Andhra Pradesh, India during July 29 – 30, 2022.

Workshops/Webinars/Events Organized No. : 6

1) Organized student development program on “Image Processing Applications using AI” from 12-15 Dec 2024.
2) Organized IEEE Student Technical Hunt – 2022 “***TRUSHNA***” under the theme: *Leveraging Technology for Better Future* on 24-November-2022 as co-coordinator.

3) Organized and delivered a lecture on 'IoT Health Care Applications' in value added course "Smart System Design for IoT Applications" for the benefit of faculty and students at Gudlavalleru Engineering College during 1st – 5th February 2021.

4) Organized a webinar on "Formal Verification in ASIC Design Flow" on 27th September 2021.

5) Organized a technical session, on the eve of Engineers day, on "Industrial Trends and Job Opportunities for Young Engineers" on 15th September 2021.

6) Organized free live webinar on "Edge Node Design Issues for IOT Applications" on 24th August, 2021.

Workshops/FDP/Seminars Attended No. : 21

1) AICTE Training And Learning (ATAL) Academy Faculty Development Program on "High Performance Computing for Medical Image Processing and Computer Vision" at MNNIT Allahabad from 09/12/2024 to 14/12/2024.

2) AICTE Training and Learning (ATAL) Academy Faculty Development Program on "Advanced Solutions for Space Exploration and Modern Defense System" at IIIT Kottayam from 02/12/2024 to 07/12/2024.

3) NPTEL-AICTE faculty development program on "Introduction to Machine Learning" during Jul-Sep 2024.

4) NPTEL-AICTE faculty development program on "Digital Image Processing" during Jul-Oct 2023.

5) NPTEL-AICTE faculty development program on "System Design through Verilog" during Jul-Sep 2023.

6) "2022 IEEE R10 Mini Panel of Conference Organizers" conducted by IEEE Guntur Subsection & IEEE Hyderabad section at KLEF Deemed to be University from 18th November, 2022.

7) "Outcome based Education and Design Thinking" Professional Development Program (PDP) conducted by IEEE Guntur Subsection at KLEF Deemed to be University from 7th to 15th October, 2022.

8) A Two day FDP on "FULL CUSTOM IC DESIGN using CADENCE Software Tools" organized by Dept. of ECE, Seshadri Rao Gudlavalleru Engineering College, during 4th – 5th August 2022.

9) A Two-day workshop on "MACHINE LEARNING: CONCEPTS AND APPLICATIONS" organized by R&D Cell, Seshadri Rao Gudlavalleru Engineering College, Gudlavalleru, during 30th June – 01st July, 2022.

10) One day FDP on "Intellectual Property Rights" organized by IQAC in association with ISTE India at Seshadri Rao Gudlavalleru Engineering College on 26th March 2022.

11) AICTE Training And Learning (ATAL) Academy Online Elementary FDP on "RECENT ADVANCES IN SIGNAL PROCESSING" from 02/08/2021 to 06/08/2021 at Jawaharlal Nehru Technological University Kakinada.

12) "Soft Computing Techniques using Python" two week FDP conducted at dept. of CSE, Gulavalleru Engineering College, 27 Jan – 07 Feb 2020.

13) "Data Acquisition and RT using LabVIEW" one week FDP conducted at dept. of ECE, Gulavalleru Engineering College, 25-30 Nov 2019.

14) "National Workshop on Graphical System Design using LabVIEW (NWLABVIEW-2K17)" conducted by Dept. of ECE, AUCE(A), Andhra University, Visakhapatnam, 30-31 Mar 2017.

15) One Week Foundation Course on "MATLAB and LATEX" conducted at Dept. of EEE, Andhra University, Visakhapatnam, 05-09 Dec 2016.

16) "National Workshop on Advanced Antenna Design (NWAAD-2K16)" conducted by Dept. of ECE, AUCE(A), Andhra University, Visakhapatnam, 19-21 Oct 2016.

17) "System Modelling, Simulation and Advanced Optimization Tools for Nanotechnology Applications-2016 (SYSTA-2016)" Conducted by Center for Nanotechnology, AUCE(A), Andhra University, Visakhapatnam, 19-24 Sep 2016.

18) "MATLAB, Simulink & Related Tool Boxes for Engineering Education" conducted at Andhra Loyola Institute of Engineering and Technology, Vijayawada, 11-12 Dec 2015.

19) Pre-conference workshop of 13th International Conference on Electromagnetic Interference and Compatibility (INCEMIC-2015), Andhra University, Visakhapatnam 20-21 July 2015.

20) "MATLAB & Simulink for Engineering Education" at Visakhapatnam, 26 Feb 2015.

21) A Two Day National Workshop on "Embedded Systems & Real-Time Operating Systems (ESRTOS-2012)" at GMR Institute of Technology, Rajam, 16-17 Nov 2012.

Online FDP / Webinars Attended: 34

NPTEL Certifications:

1) Digital Circuits 62% (Elite)

2) Signals & Systems 85% (Elite + Silver)

3) System Design through Verilog 92% (Elite + Gold)

4) Digital Image Processing 91% (Elite + Gold)

5) Introduction to Machine Learning 73% (Elite + Silver)

Guest Lectures Delivered: 1

1. Organized and delivered a lecture on 'IoT Health Care Applications' in value added course "Smart System Design for IoT Applications" for the benefit of faculty and students at Gudlavalleru Engineering College during 1st – 5th February 2021.

Subjects Handled:

Under Graduation

Digital Signal Processing, Digital Image Processing, Image Processing, Assistive Technologies, Video Processing, Satellite Communications, Probability Theory and Random Process, Signals & Systems, Telecommunication Switching Systems & Networks, Computer Networks Engineering, Switching Theory & Logic Design.

Labs Handled: (UG)

VLSI, Digital Signal Processing, Electrinic Devices & Circuits, Digital Ics & HDL, Analog Electronic Circuits, Microprocessor & Microcontrollers Interfacing

Post-Graduation

Computers & Communication Networks**,** VLSI**,** Analog IC Design**,** EMI/EMC

Other Responsibilities

College Level

1) Faculty Advisor for IEEE Student Branch (STB63311).

Department Level

1) Associate Mentor for Academic Strengthening & Advancement.
2) Co-ordinator for Community Service Project (CSP)
3) Internal Examinations Coordinator from 2020 to till date.
4) Faculty Advisor for IEI Student Chapter
5) NBA Criterion 8 coordinator

Projects Guided:

Under Graduation: 05

S.No.	Name of the project	Year

1	Identification Epilepsy using Discrete Wavelet Transform and Random Subspace Techniques	2020
2	Compression of Uterine MMG Signals using the DCT and the Huffman Coding	2020
3	Analyzing the mental task ability of students based on Electroencephalography signals	2021
4	Classification of Electrocardiograms using Deep Learning Techniques for the Prediction of COVID-19	2023
5	Machine Learning Approach to Parkinson's Disease Classification using Electroencephalography Signals	2024

Post-Graduation: 01

S.No.	Name of the project	Year
1	Performance analysis of ischemic stroke using soft computing techniques	2014

Curriculum Design and Development

1) The curriculum designed for *Assistive Technologies* for B.Tech 3rd year students as professional elective.

Declaration

I hereby declare that all the above-furnished information is correct to the best of my knowledge.

Date: 19-03-2025 Signature
Place: Gudlavalleru (Dr. Ananda Babu T)