



LAKIREDDY BALI REDDY COLLEGE OF ENGINEERING

(AUTONOMOUS)

Accredited by NAAC with 'A' Grade, ISO 9001:2015 Certified Institution

Approved by AICTE, New Delhi and Affiliated to JNTUK, Kakinada

L.B.Reddy Nagar, Mylavaram-521230, Krishna Dist, Andhra Pradesh, India

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

VLSI&ES Research Group

Introduction:

The VLSI and ES Research Group consist of eleven members of the Department of Electronics and Communication Engineering. The objectives of the Group are to investigate aspects of VLSI and ES design and its impact on modern electronic device, circuit and system design, including the development of software and hardware for design automation as well as the implementation of large electronic systems on silicon and gallium arsenide. The research program covers the complete spectrum of VLSI research including: device, circuit and system design, as well as software for IC design. A full array of courses at the graduate and post undergraduate levels is offered to support this research program. The VLSI & Embedded Systems Lab deals with the professional development of combined hardware /software solutions. We particularly specialized on real-time capabilities, and energy-optimization of embedded systems.

Objectives:

The major objectives of the VLSI&ES research group are:

- To provide a solid foundation in Analog, Digital and Mixed mode architecture principles leading to VLSI design.
- To enrich faculty and in turn students to excel in research leading to cutting edge technology in VLSI &ES and creating professionals in this field.
- To understand the various VLSI& ES applications and embedded systems to find solutions viz. comprehend, analyze, design, and create novel products and solutions for the real life problems.
- To conduct research colloquiums, exposure to research activities and research publications by staff and students.

Major Research Equipments:

S.No	MajorResearchEquipments/Softwares	Amount
1.	HP Pro 202GI Commercial Desktop Intel Core13-3240 Processor 4GB DDRIII RAM,500GB HDD, HP Compaq 18.5” LED	10,47,600/-
2.	Mentor Graphics Front & Back End Tools	6,26,497/-
3.	Cadence University Bundle	7,49,300/-
4.	Zynq –Zed development Board	2,12,400/-
5.	Zynq-Zed20 development Board	2,05,320/-
6.	Xilinx ISE Design Suite14.7	1,61,831/-
7.	Vertex -5FxtML 506Kit	1,23,028/-
8.	Spartan-6 Evaluation Board	1,05,703/-
9.	AR7 Development Board	97,645/-
10.	Spartan-3E with USB Programming cable	95,361/-
12.	XUP Vertex5 open SPARC Board	72,628/-

Members ofVLSI&ESGroup:

S.No	Name	Designation
1	Dr.B. Poornaiah	Coordinator
2	Dr.G.Srinivasulu	Member
3	Dr.P.LachiReddy	Member
4	Dr. Y.AmarBabu	Member
5	Dr.Busi Rambabu	Member
6	Dr.BVNRSivaKumar	Member
7	Mr.G.VenkataRao	Member
8	Mr.K.SasiBhushan	Member
9	Smt.T.Kalpana	Member
10	Mr.K.V.Ashok	Member
11	Mr.Ch.MallikarjunaRao	Member
12	Smt.K.Pavani	Member
13	Mr.N.Dharmachari	Member
14	Smt.K.Balavani	Member

Outcome of VLSI & ES Research Group

		2025-26*	2024-25	2023-24	2022-23	2021-22	2020-21	2019-20	2018-19
Journals	SCI	9	10	5	04	03	00	00	01
	SCOPUS	3	3	4	03	05	06	23	07
	UGC	3	3	0	02	06	00	11	24
Conferences		4	8	08	1	10	08	04	01
FDPsOrganized		1	1	03	2	04	03	05	04
BooksPublished		2	10	02	2	03	02	01	01
Patents		4	3	04	2	08	04	01	02
Sanctioned Projects /OtherGrants			02	01	1	00	00	01	00
ProjectProposals Submitted		3	4	03	4	05	03	07	05
Research Colloquiums		3	5	06	2	06	06	09	13
Students Projects			36	32	34	34	32	30	30

Research Publications

International Journal Publications in the Period of 2025-2026*

1. **A NarendraBabu**, Peravalli Rahul, Srinivasaraokarumuri, A Srisaila, N Janardhan, V Vijayasri Bolisetty, Rudra Lakshmi Prasanna, Ravi sankarpuppala, GirijaSravaniKondaveeti “A Comprehensive Study on Device and Circuit Level Performance of Vertically stacked Doping-Less Nanosheet Field Effect Transistor” in **IEEE Access**,
<https://ieeexplore.ieee.org/document/11422859>
2. **Kola Balavani**,N.Padmavathy, NaliniBodasingi, “Review of carbon nanotube on-chip interconnects in RLC prediction using artificial intelligence” in **Materials Today Communications**, 50, **January 2026**, 114542
<https://doi.org/10.1016/j.mtcomm.2025.114542>
Q2 Journal
Indexed in Scopus
3. **SrinivasuluGundala**, V.N.V. Satya Prakash, Mohammed MahaboobBasha, S.K.UmarFaruk, V.Madhurima, S³ learning: image enhancement using optimized very deep homomorphic filtering enabled image enhancer, **The Imaging Science Journal**, **September 2025**, ISSN:1743-131X
<https://doi.org/10.1080/13682199.2025.2550060>
Q4 Journal
Indexed in Web of Science and Scopus
4. **A. NarendraBabu** , Girija Sravani Kondavitee, Rapolu Anil Kumar, A. Srisaila, Gandikota Naga Chandrika,KoushikGuha, Jacopo Lannaci, Srinivasa Rao Karumuri, “A novel gate-staggered ferroelectric DM-JLTFET biosensor with T-Channel and L-Activity for label free cancer biomarker detection”, in **Microsystem Technologies**, **ISSN: 0946-7076**, **July 2025**
<http://dx.doi.org/10.1007/s00542-025-05905-1>
Q3 Journal
Indexed in Scopus
5. **Bojja Ramesh Reddy**, T.Jayachandra Prasad, M.Chennakesavulu, VaddeSeetharama Rao, ShaikKashifHussain, “Optimized High Speed Design of Arithmetic BCD Block Utilizing Complementary MOS Process”,**Journal of Active and passive Electronic Devices**, 19, pp.283-299, **ISSN:1555-029X**
<https://www.oldcitypublishing.com/journals/japed-home/japed-issue-contents/japed-volume-19-number-4-2025/japed-19-4-p-283-299/>
6. **B.Poornaiah**, K. Saujanya, A. Kamala Kumari and Y. Srinivasa Rao, “Development of Piezoresistive Strain Sensors Using Nanocomposite on Flexible Substrates: A COMSOL Multiphysics Simulation Study” in **Journal of Active and Passive Electronic Devices**, 19.4, pp.139-155,**ISSN:1555-029X**
<https://www.oldcitypublishing.com/journals/japed-home/japed-issue-contents/japed-volume-19-number-4-2025/japed-19-4-p-329-339/>

Indexed in Web of Science

7. **SrinivasuluGundala**, Ramaswamy T, S.P.V.Subba Rao, A.Saketh, B.SathwikGoud, K.Varshith Reddy, “Implementation of Energy and EDP Efficient Full Adder Circuits for Computing Systems” in **Journal of Active and Passive Electronic Devices**, 19.1, pp.139-155, **October2025**, ISSN:1555-029X
<https://www.oldcitypublishing.com/journals/japed-home/japed-issue-contents/japed-volume-19-number-2-2025/japed-19-2-p-139-155/>

Indexed in Web of Science

8. **SrinivasuluGundala**, Mohammed MahaboobBasha, Ramaswamy T, Jerry K.Paul, P.Sumanth, G.Hari Kishore Reddy, “Development of Li-Fi Enabled EV to EV Wireless Charging Communication System, in **Journal of Active and Passive Electronic Devices**, 19.1, pp.67-80, **October2025**, ISSN:1555-029X
<https://www.oldcitypublishing.com/journals/japed-home/japed-issue-contents/japed-volume-19-number-1-2025/japed-19-1-p-67-80/>

Indexed in Web of Science

9. **BusiRambabu**, ChinnalaPavan Kumar, K Sivani, KotteSowjanya, “Homogeneous and Heterogeneous Dual/Double Gate TFETs: Exploring High-k Materials and Thickness variations”, **Journal of Active and Passive Electronic Devices**, 19, **August 2025**, ISSN:1555-0281, pp.1-21
<https://www.oldcitypublishing.com/journals/japed-home/japed-issue-contents/japed-volume-19-number-1-2025/japed-19-1-p-1-21/>

Indexed in Web of Science

10. **A NarendraBabu, Deepti Bhargava, R. K. N. R. Manepalli, M. C. Rao, P. VenkataRamana Rao, N. S. Subba Rao, A. NarendraBabu, P. SreeBrahmanandam**, “Hydrothermal synthesis and defect-driven optical characterization of CdS nanoparticles for semiconductor and solar applications” in **International journal of applied power engineering**, Vol. 15, No.1, pp.440–448, March-2026, ISSN:2252-8792

DOI: <http://doi.org/10.11591/ijape.v15.i1.pp440-448>

11. **E.V.Krishna Rao**,EswararaoBoddepalli, SV Jagadeesh Chandra, K SrinivasaYadav, P Sasanka, Efficient Physical Design Techniques for High-Speed, Area-Optimized12x12 Multiplier Using CSA, in **TuijinJishu/Journal of Propulsion Technology**, 46(4), ISSN: 1001-4055
<https://www.propulsiontechjournal.com/index.php/journal/article/view/10074>

12. **SrinivasuluGundala**, P.Bhuvaneshwari, V.Madhurima, Mohammed MahaboobBasha, Mohan Dholvan, “Detection of Parkinson’s Disease using Voice and spiral Drawings on Machine Learning Approaches” in **Engineering Access**, 11(2), 2025, **(July-December)** ISSN:2730-4175
<https://ph02.tci-thaijo.org/index.php/mijet/article/view/254301/172335>

Indexed in Scopus

1. AnandbabuGopatoti, James Stephen Meka, **Poornaiah Billa**, “Hybrid medical image encryption with compression framework for Internet of Medical Things” in **Computers and Electrical Engineering**, 126(2025) 110443, June 2025. ISSN: 1879-0755

<https://doi.org/10.1016/j.compeleceng.2025.110443>

<https://www.webofscience.com/wos/author/record/AAV-7858-2021>

Q1 Journal, I.F-4.9

Indexed in Scopus and Web of Science

2. S.Vijayakumar, **Lachi Reddy Poreddy**, Mohammed Mahaboob Basha, Karnam Gopi, Srinivasulu Gundala and Javed Syed, “Design of Spurious Dynamic Inverter-Based Level Shifter with Error Tolerance for Robotic Arm Controller”, **Micromachines**, November 2024, 15(12). SCIE Q2, ISSN:2072-666X

<https://doi.org/10.3390/mi15121431>

<https://www.webofscience.com/wos/woscc/full-record/WOS:001384702800001>

Q2 Journal, I.F- 3.0

Indexed in Scopus and Web of Science

3. Raja Dhanavath, Satish Kumar Injeti, **Rambabu Busi**, “Grid-Edge optimization for maximizing the utilization of solar battery and wind biomass systems in Large-Scale Networked Microgrids to minimize overall cost” in **Journal of Active and Passive Electronic Devices**, 18(4), ISSN:1555-029X, pp.257-281

<https://www.oldcitypublishing.com/journals/japed-home/japed-issue-contents/japed-volume-18-number-4-2025/japed-18-4-p-257-281/>

<https://www.webofscience.com/wos/author/record/N-4832-2017>

Indexed in Web of Science

4. Raja Dhanavath, Satish Kumar Injeti, **Busi Rambabu**, “Optimization of solar-wind-battery Energy Storage systems in a Large Scale Networked Microgrids for the minimization of overall grid cost using improved butterfly optimizer” in **Journal of Active and Passive Electronic Devices**, 18(3),ISSN:1555-029X, pp.195-216

<https://www.oldcitypublishing.com/journals/japed-home/japed-issue-contents/japed-volume-18-number-3-2025/japed-18-3-p-195-216/>

<https://www.webofscience.com/wos/author/record/N-4832-2017>

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5. K. Saujanya, **B.Poornaiah**, A. Kamala Kumari, Y. Srinivasa Rao, “The Effect of Strain Pulses on PVC-Graphite Nickel Thick Film Resistors” in **Journal of Active and Passive Electronic Devices**, 18(4), pp.317-325, April 2024, ISSN: 1555-029X

<https://www.oldcitypublishing.com/journals/japed-home/japed-issue-contents/japed-volume-18-number-4-2025/japed-18-4-p-317-325/>

Indexed in Web of Science

6. Mohammed Mahaboob Basha, Pendli Pradeep, **SrinivasulGundala**, Javed Syed, “Design of Compact and high gain dual-band four-port MIMO antenna array for mm-wave 5G communications”, **Results in Engineering**, 2025, **January 2025**, 25,ISSN:2590-1230

<https://doi.org/10.1016/j.rineng.2025.104153>

<https://www.webofscience.com/wos/author/record/AAD-5051-2020>

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7. **M. Venkata Sudhakar**, “High-Speed voltage level-up shifter with wide range conversion for system-on-chip applications” in **Engineering Research Express**, November 2024, ISSN: 2631-8695
<https://iopscience.iop.org/article/10.1088/2631-8695/ad923c>

<https://www.webofscience.com/wos/author/record/P-5819-2017>

Indexed in Scopus and Web of Science

8. Mohammed Mahaboob Basha, **Srinivasulu Gundala**, V Madhurima and Arfat Ahmad Khan, “Design of energy-efficient full subtractor circuit at near threshold computing for signal processing application” in **Engineering Research Express**, 6(4), October 2024. ISSN: 2631-8695
<https://doi.org/10.1088/2631-8695/ad81ce>

<https://www.webofscience.com/wos/author/record/AAD-5051-2020>

Indexed in Scopus and Web of Science

9. **Rambabu Busi**, **Satyanarayana Talam**, Ch. Karthikeya Reddy, T. Ashok Reddy, R. Gowtham Arun Kumar R. Naveen, Ch. Jyothi ram and M. Harshada (2024), “Design, Simulation and Optimization of MEMS-based Piezoresistive Biosensor with Stress Concentration Region for Biosensing Applications” in **The Journal of Active and Passive Electronic Devices (JAPED)** USA, Vol.18. Issue. 1-2, P.P. 153-160, 2024. October 2024, ISSN: 1555-0281 (P) 1555-029X (O)

<https://www.oldcitypublishing.com/journals/japed-home/japed-issue-contents/japed-volume-18-number-2-2024/japed-18-2-p-153-160/>

<https://www.webofscience.com/wos/author/record/N-4832-2017>

Indexed in Web of Science

10. M. Mahaboob Basha, **Srinivasulu Gundala** and **Rambabu Busi** (2024), “Minimization of Leakage Current Control in CMOS Adder Circuits Using Parametric Variations” published in **The Journal of Active and Passive Electronic Devices (JAPED)**, Vol.18. Issue. 1-2, P.P. 105-118, 2024. October 2024, ISSN: 1555-0281 (P) 1555-029X (O)

<https://www.oldcitypublishing.com/journals/japed-home/japed-issue-contents/japed-volume-18-number-2-2024/japed-18-2-p-105-118/>

<https://www.webofscience.com/wos/author/record/AAD-5051-2020>

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11. **Ravi Kumar Kandagatla**, Surya Teja K, Ramya S, Vijaya Kumar P, Dileep Kumar P, “Design of a high Gain Low Noise Amplifier at 3.3 GHz using CMOS Technology”, in **Engineering Access**, 11(1), December 2024, pp.45-49, ISSN:2730-4175

<https://ph02.tci-thaijo.org/index.php/mijet/article/view/253867>

<https://www.scopus.com/authid/detail.uri?authorId=57194103955>

Indexed in Scopus

12. MoammedMahaboob Basha, P. Bhuvanswari, V. Madhurima, **Lachi Reddy Poreddy**, Srinivasulu Gundala, “Machine Learning Enabled System for Screening Covid-19 kind of disease for dense population sector” in **Engineering Access**, 11(1), **December 2024**, pp.128-133, ISSN:2730-4175
<https://ph02.tci-thaijo.org/index.php/mijet/article/view/254231>

<https://www.scopus.com/authid/detail.uri?authorId=57216364368>

Indexed in Scopus

13. Mahammed Rafi.G, R. R. Dhanalakshmi, **Rambabu. B**, “Design of Multi-loop PI controller for minimum phase system level regulation in a quadruple tank: A method for Constraint optimization” in **International Journal of Electrical and Electronics Research (IJEER)**, 12(3), **July 2024**,ISSN:2347-470X
<https://doi.org/10.37391/IJEER.120315>

<https://www.scopus.com/authid/detail.uri?authorId=57204657881>

Indexed in Scopus

International Journal Publications in the Period of 2023-2024

1. Mohammed Mahaboob Basha, Lachi Reddy Poreddy, Virupakshi Madhurima, Srinivasulu Gundala, Javed Syed, “Full Swing Nanosecond Deay Hybrid Level Shifter for time-critical applications” in *Electronics*, 13(13), June 2024. ISSN: 2079-9292, IF:2.9
<https://www.mdpi.com/2079-9292/13/13/2570>
- 2.Srinivasulu Gundala, Mohammed Mahaboob Basha, Virupaksh iMadhurima, Ovidiu PetruStan,“Input voltage level driven split-Input Inverter level shifter for Nanoscale Applications”, *Electronics*, 13(6), March 2024,1115,ISSN: 2079-9292,IF:2.9
<https://doi.org/10.3390/electronics13061115>
- 3.Suresh Addepalli, Jadadeesh, E.V.Krishna Rao, Uthanna Suda, Reactive magnetron sputtered aluminium titanate high-k dielectric films for MIM devices, in *Aplied Physics A Materials Science & Proessing*, 129(793), October 2023, ISSN: 1432-0630, H-Index- 158, I.F.-2.983
<https://doi.org/10.1007/s00339-023-07065-3>
- 4.Mupidi Venkata Sudhakar, Ovidiu Petru Stan, “Implementation of High-Speed Compact Level-UpshifterforNano-ScaleApplications”,in*Electronics*12(24)December2023, ISSN:2079-9292,5015, H-Index-62,I.F.-2.9
<https://doi.org/10.3390/electronics12245015>
- 5.M.Venkata Sudhakar, P. Rahul Reddy, U. Penchalaiah, “A deep learning based latency aware predictive routing model for network-on-chip architectures” in *International Journal of Communication Systems*, September 2023,ISSN:1099-1131,H-Index-56, I.F.-2.1.
<https://doi.org/10.1002/dac.5602>
- 6.M.Venkata Sudhakar, Uma Sankar Gutta, “Development of Compact Voltage Level up Shifter for nano-second delay system-on-chip applications” in *Engineering Research Express*, 5(3), September 2023,ISSN:2631-8695, H-Index-14.
<https://doi.org/10.1088/2631-8695/acf64a>

7.T.Kalpana, Challa Lakshmi Reddy, Bandaru Saranya, Poluboyina Naveen, A low voltage 6T1RAM cell design and analysis using cadence 90nm and 45nm CMOS technology, in 7 th IEEE International Conference on Devices, Circuits and Engineering held at Karunya Institute of Technology and Sciences, Coimbatore, from April 23-24, 2024
<https://ieeexplore.ieee.org/document/10560497>

International Journal Publications in the Period of 2022-2023

1. Importance of the donor unit on fluoranthene for selective detection of nitro aromatic explosives, Kasthuri Selvaraj, Praveen B, Sharmarke Mohamed, Satyanarayana Talam, Venkataramaiah Nutalapati, Journal of Photochemistry & Photobiology, A: Chemistry, 433, Aug-22, 114215, 1010-6030
2. Structural investigations of borate incorporated germanium antimonite glasses, A. Pranav Kumar, S. Hima Bindu, P. Venkateswara Rao, K. Naveen Kumar, M. Mohan, T. Satyanarayana, M. Sroda, P. Syam Prasad, Results in Chemistry, 4, Jul-22, 100449, 2211- 7156.
3. Studies on stability of polymer thick film resistors by using pulse voltage trimming method (PVTM), Poornaiah Billa, Y. Srinivasa Rao in Journal of Active and Passive Electronic Devices, 17(1), 1-19, May 2023, ISSN: 1555-029X
4. Design of Near -threshold CMOS and TG Based Adder Circuit for Computing Applications, Basha, Busi Rambabu, Gundala Srinivasulu, Naishadh kumar PV, Journal of Active and Passive Electronic Devices, 16(3), 191-201, December 2022, ISSN: 1555-029X
5. The influence of high voltage impulses on PVC-Graphite Thick Film Resistors, Busi Rambabu, T. Satyanarayana, Gundala Srinivasulu, Y. Srinivasa Rao, in Journal of Active and Passive Electronic Devices, 16(3), 225-231, Dec 2022, ISSN: 1555-029X
6. Smart Energy Meter, A. Narendra Babu, Ch VLD Kavya, A. Praneetha, T T Sai Dhanush, TV Ramanaiah, K Nideesh, PS Brahmanandam, Indian Journal of Science and Technology, 15, 29, Jul-22, 1451-1457, 0974-6846 (Additional Web of Science Zoological Record)
7. Fem to power-delay (FPD) super threshold level shifternet work on chip (NoC), Srinivasulu Gundala, M. Mahaboob Basha, Rambabu Busi, International Journal of Electronics Letters, Nov-22, ISSN: 21681724, 21681732
8. Performance Analysis of on Chip Interconnects for ASIC Design, Amar Babu. Y, Lakshmi Neeraja Nalluri, Swaroop Dharavathu, Pavani Uppala, in International Journal of Scientific Research in Engineering and Management (IJSREM), 7(3), March 2023, ISSN: 2582-3930, 1-4
9. Design and Implementation of FPGA based Smart Embedded Vision System for Biomedical Applications, Y. Amar Babu, S.V.K. Pratap Reddy, N. Banbhushan, P. Venkatesh, K. Tirumala Krishna, in International Journal of Innovative Engineering and Management Research, 12(2), February 2023, ISSN: 2456-5083, 332-336

International Journal Publications in the Period of 2021-2022

1. Level-up /Level-Down Voltage Level Shifter for Nano-Scale Applications, Srinivasulu Gundala, M. Mahaboob Basha, S. Vijaya Kumar, Journal of Engineering Science and Technology, 17(1), (January 2022), 745-759, 1823-4690
2. A Qualitative Review on Tunnel Field Effect Transistor-Operation, Advances and Applications, Sadhu Satya Sravani, B. Balaji, K. Srinivasa Rao, A. Narendrababu, M. Aditya, K. Girja Sravani, Silicon
3. An Experimental Performance on Solar Photovoltaic Thermal Collector with Nanofluids for Sustainable Development, Srinivasulu Gundala, M. Mahaboob Basha, V. Madhurima, N. Praveena, S. Venkatesh Kumar, Journal of Nanomaterials, 2021, (October 2021), 6946540, 1687-4110 (Print), 1687-4129
4. Design of low power SRAM- based ubiquitous sensor for wireless body area networks, Neeraj, K., Mahaboob Basha, M. and Gundala Srinivasulu, International Journal of Pervasive Computing and Communications, 17(5), (December 2021), 611-621, 1742- 7371 (Print), 1742-738X

5. Study of statistical estimated parameters using ERA5 reanalysis data over khulna region during monsoon season, Ravindranadh Koutavarapu, N. Umakanth, T. Satyanarayana, M. Seshu Kumar, M.C. Rao, Dong-Yeon Lee, Jaesool Shim, Acta Geophysica, 69(5), (August 2021), 1963-1978, 18956572(print), 18957455(online)
6. Studies on Reliability of polymer thick film resistors by using pulse voltage trimming method (PVTM), Poornaiah Billa, Y. Srinivasa Rao, Journal of Active and Passive Electronic Devices, 16(3), (May 2022), 1555-0281(print), 1555-029X(online)
7. Design of Energy and EDP Efficient 1-bit full subtract or based divider circuits for computing systems in International Journal of System of Systems Engineering, M. Mahaboob Basha, Srinivasulu Gundala, Sibghatullah I. Khan 11(3-4), (March 2022), 257-267, 1748-0671(Print), 1748-068x (online).
8. Comparative Analysis of NAND Gate and D Flip-Flop in Terms of Delay and Power, G. Venkata Rao, P. Vineela Sri Charani, Sk. Rahaman, T. Sasank, International Journal of Innovative research in Technology, 8(12), May 2022, ISSN: 2349-6002
9. Smart Crop Monitoring and Automatic Irrigation System using Machine Learning and IoT, Y.S.V. Raman, P. Suresh, P. Jnana Sudheer, P. Prudhvi, S. Gopi, A. Narendra Babu, Revista Geintec-Gestao Inovacao E Tecnologias, 11(4), (July 2021), 2747-2757, 2237-0722(online)
10. Design of High Speed and Low Area Confined Multiplier on FPGA, Kandagatla Ravi Kumar, Cheeli Priyadarshini, Kanakam Bhavani, Ankam Varun Sundar Kumar, Palanki Naga Nanda Sai, Revista Geintec-Gestao Inovacao E Tecnologias, 11(4), (July 2021), 2736-2746, 2237-0722(online)
11. Development of Wearable Vest for Monitoring Body Health Parameters, B.V.N.R. Siva Kumar, B. Vasanthi, K. Pravallika, A.V. Amar Sai Kumar, K. Kiran, Turkish Journal of Physiotherapy and Rehabilitation, (August 2021),
12. Design and Implementation of High Speed and Securable FFCKBA” in Design Engineering, A.H.S.S.V. Prasad, Y. Amar Babu, (July 2021), 7359-7367, 0011-9342(Print),
13. Smart Door System with Thermal Screening and Mask Detection for Covid-19 Rehabilitation, Srinivasulu Gundala, N. Meghana Preethi, G. Tejaswini, Ch. Gayathri, A. Harshavardhan Reddy, Design Engineering, 2021(7), (August 2021), 9554-9561, 0011-9342 (Print)
14. A High Flexible Low-Latency Memory based 5G FFT Processor, T. Kalpana, V. Yaswanth Naveen, Y. Manasa, N. Naveen Reddy, International Journal of Future Generation Communication and Networking, 14(1), (August 2021), 3113-3121, 2233-7857(Online)

International Journal Publications in the period of 2020-2021

1. Y. Srinivasa Rao, K.V. Subrahmanyam, B. Poornaiah, B. Rambabu, “The Effect of Microwave Trimming on Electrical and Stability Characteristics of Polymer thick film Resistors” in Journal of Active and Passive Electronic Devices, Vol. 15, Issue-3, pp. 223-242, ISSN: 1555-028, January 2021
2. Y. Amar Babu, Vemireddy Kavaya, “Design of Energy Efficient Feature Map Encoding Scheme using MLC STT RAM Memory Management”, in Journal of Critical Reviews, Vol. 7, Issue-16, pp. 2191-2196, ISSN: 2394-5125, H-Index-5, July-2020, Impact factor-0.6
3. Srinivasulu Gundala, Bhanu Konda “Design and Analysis of 4X4 SRAM Array using 22nm Technology”, in Journal of Critical Reviews, Vol. 7, Issue-16, pp. 2176-2183, ISSN: 2394-5125, H-Index-5, July-2020, Impact factor-0.6
4. P. Lachi Reddy, Nunna Swathi “Design of Advanced and Automatic Water Level Meter for Alerting Population about Floods” in Journal of Critical Reviews, Vol. 7, Issue-16, pp. 2176-2183, ISSN: 2233-2238, H-Index-5, July-2020, Impact factor-0.6
5. Srinivasulu Gundala, Kommu Siddhartha Mavovarakumar, Kona Naga Nandini, Sravani Gantala, J. Ravi Sankar Varma, C. Navya, "Development of Optimized Voltage Level Shifter for Nanoscale Applications" in ARPN Journal of Engineering and Applied Sciences, Vol. 15, No-14, July 2020, ISSN: 1819-6608, H-Index-32

6 RVNS Bharath, U. Moinudin Khan, P.Ramprasad ,Talam Satyanarayana, G Anusha Reddy, M.C. Rao, “Modeling of Dielectrophoretic Separation Platelets from Red Blood Cells” in Journal of Critical Reviews, July2020, Vol.No7, Issue-06, pp- 32-39, ISSN: 2394-5125, H-Index-5

Conferences**

Conference Proceedings 2025-26 **

1. **Venkat Rao Pasupuleti**, Shaik Rabbani Basha, G. Sushma, Syed NafeesAhamed, P.Venkateswarlu Reddy, D. Ganesh, “IoT based Wildlife Intrusion Detection and Alert System using Sensor Fusion and AI for Agricultural Protection” in **2025 International Conference on Sustainable Communication Networks and Application (ICSCN) at Theni, India**, during 15-10-2025 to 17-10-2025 (Online December 2025)
<https://doi.org/10.1109/ICSCN67106.2025.11308491>
2. **N.Dharmachari**SaiVyshnaviDanda, SaurabhKesari, Shashank Kumar Singh, Jayaraj U Kidav, M.K.Lingamurthy, “Design and Implementation of reliable fault-tolerant data transmission using triple modular redundancy and CRC-based error detection” in **2025 International Conference on Next Generation Information System Engineering (NGISE)** during 28-03-2025 to 29-03-2025 (**Online July 2025**)
<https://doi.org/10.1109/NGISE64126.2025.11085298>
Indexed in Scopus
3. **Ramesh Reddy Bojja**, Ravi Kumar Saidala, SatyanarayanareddyMarri, Umeshareddy, Chethana R M, Prabhu Shankar B, “Real-Time Neural Network System for Identifying isual Learners from Raw EEG data”, in **2024 International Conference on Advances in Computing, Communication and Materials (ICACCM)**during 22-23 November 2024 (**Online July 2025**), Tula’s Institute, Dehradun, India,**ISBN:979-8-3503-6797-3**
<https://doi.org/10.1109/ICACCM61117.2024.11059002>
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4. **A. NarendraBabu**, S.Sridevi, K. Tarakeswara Rao, Jayashree Das, Subrata Kumar Das, M. Rajesh Yadav, P.S.Brahmanandam, “Rainfall prediction using CAPE and surface temperatures in three major indian cities” **AIP Conference Proceedings, July 2025**, 3298, 040030 (2025), **ISSN:0094-243X**
<https://doi.org/10.1063/5.0279355>
Indexed in Scopus

Conference Proceedings 2024-25

1. **B.Y.V.N.R.Swamy**, M. Sambasiva Reddy, M.Serishma, K. Lokesh, M. Mounika, S.K.Abdul Mushtaq, “IoT based vehicle accident and alcohol detection system by using GSM and GPS” in AIP Conference Proceedings, in 1st International Conference on Emerging Technologies in Engineering and Science, ICETES 2023, Kanchikacherla during 11-08-2023 to 12-08-2023 (**Online February 2025**), 3162(1)
2. **PoornaiahBilla**, J. Divya, P. Lakshmi Lavanya, M.Vidya, “Efficient Detection of Lung Diseases using Deep Learning Through Scan Images” in **1 st International Conference on “Computational Intelligence for Security, Communication and Sustainable Development (CISCSD)** on 5th-6th August 2024 organized by **Dr.B.R.Ambedkar Institute of Technology, Port Blair, Andaman & Nicobar Islands.**, ISSN:979-8-3503-6540-5 (Online Feb 2025)

<https://doi.org/10.1109/CISCSD63381.2024.00058>

Indexed in Scopus

3. **PoornaiahBilla**, Uday Kiran, Y. Jigeesha, B. Baby Shalini “Design and Implementation of 4-bit synchronous up counter using GPKD 45 Technology” in **1 st International Conference on “Computational Intelligence for Security, Communication and Sustainable Development (CISCSD)** on 25-26 April 2024 organized by **Dr.B.R.Ambedkar Institute of Technology, Port Blair, Andaman & Nicobar Islands.**

ISSN:979-8-3503-6540-5 (Online Feb 2025)

<https://doi.org/10.1109/CISCSD63381.2024.00065>

Indexed in Scopus

4. Mohammed Mahaboob Basha, P.Sai Rama Shashank, G. Rushikesh, K. Varsha Reddy, G. Ganesh Kumar, **Srinivasulu Gundala**, “Distributed Arithmetic Based FIR FPGA Implementation, in**15th International Conference on Computing, Communication and Networking Technologies**, held at **IIT-Mandi** during 24-06-2024 to 28-06-2024. (**Online November**) ISBN:979-8-3503-7024-9

<https://doi.org/10.1109/ICCCNT61001.2024.10725340>

Indexed in Scopus

5. **Kola Balavani**, V.Akshara, E.Venkata Sandeep,M.Charan Sai, K. Raghava Rao, B. Naresh Kumar Reddy,“Enhanced PSO Integrated Machine Learning for Launch Vehicle Engine Temperature and Pressure Monitoring for Risk Prediction” in **15th International Conference on Computing, Communication and Networking Technologies**, held at **IIT-Mandi** during 24-06-2024 to 28-06-2024 (**Online November**) ISBN:979-8-3503-7024-9.

<https://doi.org/10.1109/ICCCNT61001.2024.10725589>

<https://www.scopus.com/authid/detail.uri?authorId=58515760700>

Indexed in Scopus

6. Mohammed Mahaboob Basha, Krishna Samalla, **Srinivasulu Gundala**, Nouchu Rahul, Dadapak Sriya, Salluri Deepika, Exploring energy efficient area optimized one-bit full Subtractor circuit for Signal processing application using CMOS and FinFET Technology, in **2024 IEEE 2nd International Conference on Networking, Embedded and Wireless Systems (ICNEWS)**, on 22-23 August 2024 organized by **BMS college of Engineering, Bangalore.** (**Online 29 October 2024**), ISBN:979-8-3503-6746-1

<https://doi.org/10.1109/ICNEWS60873.2024.10730942>

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7. V.Madhurima, M.Bharathi, **Srinivasulu Gundala**, M Mahaboob Basha, M Poornima, G Sandhya Kumari, “Novel Method for Bone cancer detection using Segmentation and classification with CNN”, in **2024 5th International Conference on Electronics and Sustainable Communication Systems (ICESC)**, at Coimbatore India, during 7-9 August 2024 (**Online 2 October 2024**) ISBN:979-8-3503-7994-5

<https://doi.org/10.1109/ICESC60852.2024.10689931>

Indexed in Scopus

8. Mohammed Mahaboob Basha, Vadde Seetharama Rao, **Lachi Reddy Poreddy**, V.Madhurima, Srinivasulu Gundala, Ovidiu Petru Stan“Implementation of Full Adder Cells for Ultra Low Power Energy Efficient Computing Applications”, in **2nd International Conference on Sustainable Computing and Smart Systems (ICSCSS 2024)** organized by **Hindusthan College of Engineering and Technology**, Coimbatore, India on 10-07-2024 to 12-07-2024., (**Online 20 August 2024**), ISBN: 979-8-3503-7999-0

<https://doi.org/10.1109/ICSCSS60660.2024.10625340>

Indexed in Scopus

Conference Proceedings 2024-25

1. T.Kalpna, Challa Lakshmi Reddy, Bandaru Saranya, Poluboyina Naveen, Allowvoltage 6T SRAM cell design

and analysis using cadence 90nm and 45nm CMOS technology, in 7th IEEE International Conference on Devices, Circuits and Engineering held at Karunya Institute of Technology and Sciences, Coimbatore, from April 23-24, 2024

<https://ieeexplore.ieee.org/document/10560497>

2. AmarBabuYandrapati,Susanka Nilagiri, Hari Krishna,Pallavi,“Design and Implementation of RISC-V based Pacemaker” in2023 8th International Conference on Communication and Electronics Systems, August 2023, ISBN: 979-8-3503-9663-8. <https://doi.org/10.1109/ICCES57224.2023.10192752>
3. AmarBabuYandrapati,ReshmaSriBhuma,SriKoteswaraRaoRagineedu,AkbarAlfaz Shaik, Design and Implementation of RISC-V based Smart Insulin Pump in 2023 8 th International Conference on Communication and Electronics Systems, August 2023,ISBN:979-8-3503- 9663-8 <https://doi.org/10.1109/ICCES57224.2023.10192663>
4. Satyanarayana Talam, Ayesha Begum, M.B.Chakravarthi, Tilak Mukherjee, Poornaiah Billa, Rambabu Busi, “Impact of Stress Concentrated Region on MEMS-Based Piezoelectric Energy Harvester” in Proceedings of 4 th International Conference in Communication, Devices and Computing,PartofLectureNotesinElectricalEngineeringbookseries,Vol.1046,657-664,July 2023, ISBN: 978-981-99-2710-4. https://doi.org/10.1007/978-981-99-2710-4_52
5. Srinivasulu Gundala, “Distributed Arithmetic Based FI RFPGA Implementation,in15th International Conference on Computing, Communication and Networking Technologies, held at IIT-Mandi during 24-06-2024 to 28-06-2024.

Conferences Attended by the Faculty in the Period 2022-2023

S.No	NAME	PROGRAMME	PLACE	PERIOD
1	Venkataiah C, MallikarjunaRao Y, Manjula Jayamma, Lingamurthy M.K , Mahesh Kumar,LaithH, AkhileshPandey	4th International conference on Design and ManufacturingAspects for Sustainable Energy (ICMED2023), Performance Analysis of Ternary Adder and Ternary Multiplier without using encoders and decoders	Gokaraju Rangaraju Institute of Engineeringand Technology, Hyderabad	19-20May 2023 (Online June2023), ISSN: 2267-1242

2	Rambabu Sanivarapu, Mallikarjuna Rao Y, Venkataiah C, Lingamurthy M.K , Laith H, Vyeshikha.	4th International conference on Design and Manufacturing Aspects for Sustainable Energy (ICMED2023), Design and Implementation of POSIT based Adder and Multiplier in Verilog HDL,	Gokaraju Rangaraju Institute of Engineering and Technology, Hyderabad	19-20 May 2023 (Online June 2023), ISSN: 2267-1242
3	Venkataiah, Mallikarjuna Rao Y, Manjula Jaamma, Rambabu, Lingamurthy M.K , Laith H, Sanjay Mashra	4th International conference on Design and Manufacturing Aspects for Sustainable Energy (ICMED2023), Performance Analysis of 4-bit ternary adder and multiplier using CNTFET for high speed arithmetic circuits	Gokaraju Rangaraju Institute of Engineering and Technology, Hyderabad	19-20 May 2023 (Online June 2023), ISSN: 2267-1242
4	Venkataiah, Mallikarjuna Rao Y, Manjula Jayamma, Lingamurthy M.K , Feroz Shah Ahmed, Laith H,	4th International conference on Design and Manufacturing Aspects for Sustainable Energy (ICMED2023), Performance evaluation of SRAM design using different field effect transistors	Gokaraju Rangaraju Institute of Engineering and Technology, Hyderabad	19-20 May 2023 (Online June 2023), ISSN: 2267-1242
5	B.Y.V.N.R. Swamy, V. Sathvika, V. Venkatesh, K. Narendra Reddy	International Conference on Signal processing and communication, A miniaturized metasurface based dielectric resonator antenna for wireless communications	Karunya University, Coimbatore	23-24 March 2023

6	Amar Babu Yandrapati , Venkata Krishna Pratap Reddy Singam, Banbhushan Namburu, Venkatesh Paladugu, Tirumala Krishna Karakula	4 th International Conference on Signal processing and communication, Design of a smart embedded vision system based on FPGA for medical applications	Karunya University, Coimbatore	23-24 March 2023
7	M.Venkata Sudhakar , V. Sowjanya, V.V.Ranga Sai, O.Sudheer Kumar and V.Barghava, ,	Development of Embedded Assistive Smart Helmet for Bike riding using Intelligent process, IEEE 1st International Conference on Smart and Sustainable Technologies in Energy and Power Systems SSTEPS – 2022	St. Joseph's Institute of Technology (Autonomous), Chennai	7th -9th Nov, 2022

8	Srinivasulu Gundala, KVN Divya Sri, M SandhyaDevi,G Prasad, B. Rakesh	Development of Vehicle Safety Control for the anticipation of Accidents using Intelligence process, 3 rd International Conference on Electronics and Sustainable Communication Systems(ICESC 2022),	St.Joseph'sIstitute of Technology (Autonomous), Chennai	Sep-22
9	Talam Satyanarayana, SLS Iswarya Vinjamuri,Siva KeerthiRavuru, Padmaja Nirmala,Phala Chandra	Modelling Investigations on Efficiency of Miniaturized Piezoelectric Energy Harvester, IEEE Second International Conference on Advances in Electrical, Computing, Communications and Sustainable Technologies(ICACET2022)	St.Joseph'sIstitute of Technology (Autonomous), Chennai	Jul-22
10	Talam Satyanarayana, Shaik Haniff, Shaik Ayesha Begam,Dhruva Kollu	Design and Displacement sensitivity analysis of micro scale piezoresistive cantilever, IEEE Second International Conference on Advances in Electrical, Computing, Communications and Sustainable Technologies(ICACET2022),	St.Joseph'sIstitute of Technology (Autonomous), Chennai	Jul-22

Conferences Attended by the Faculty in the Period 2021-2022

S.No	NAME	PROGRAMME	PLACE	PERIOD
1	Amar Babu Y, M Soniyaz, Maraju Yamini, M Meena Kumari,Miryala Akhil	Development of smart water system for house-hold and industrial applications, 8 th International Conference on Advanced computing and communication systems(ICACCS)	Online	June 2022
2	PoornaiahBilla, KVenkatesh,J. VenkataSai,K. Lohith, A. SampathKumar	EffectiveMonitoringandProteting system for agriculture farming using IoT and Raspberry, Materials Today: Proceedings	Online	July 2021
3	Satyanarayana Talam, Nikhitha Y,Ch. Neeraj Kumar, K. JeevanNagaSai, V.Lohitha	Optimizationofbimorphcantilever based piezoelectric energy harvester for high efficiency. Materials Today: Proceedings	Online	July 2021

4	Pavani Kollamudi , Bhargavi Koduru, Bharathi Poranki, Madhu Priya Golla	Smart Virtual Assistant, Materials Today: Proceedings	Online	July 2021
5	P.Lachi Reddy , V. Divya, D. Swapna, D. Chinmayi Srinija, M. Rajesh	Smart Traffic Controlling System, Materials Today Proceedings	Online	August 2021
6	P.Lachi Reddy , S. k. Sabiha, K. Jaswitha, P. Dinesh, V. Naveen	Optimized garbage Segregation and Monitoring System , Materials Today Proceedings	Online	August 2021
7	M.C.Rao, N. Umakanth, T. Satyanarayana , B. T. P. Madhav	Seasonal Variations of Lightning Activity over Uttar Pradesh during 1998 , AIP Conference Proceedings	Online	August 2021
8	U. Umakanth, T. Satyanarayana , B. T. P. Madhav, M.C.Rao	Study of rainfall over Patna region, India during 2013 , AIP Conference Proceedings	Online	August 2021
9	P. Prasanth, Satyanarayana Talam , B. Ramakrishna, G. Nagarjuna, B. Rambabu, M.C. Rao, N. Venkataramanaiah	Dielectric Investigations on metal (Ni and Cu) tetrahydroxy phenyl porphyrins in PMMA polymer matrix , Material today proceedings	Online	Oct 21

10	M. Mahaboob Basha, Srinivasulu Gundala, G.GaneshKumar	Performance Analysis of CMOS, PTL and GDI Based Braun Multiplier for Signal Processing Applications, 6 th IEEE International Conference on Recent Trends in Electronics, Information & Communication Technology (RTEICT-2021),	Sri Venkateshwara College of Engineering, Bengaluru, Karnataka	27/08/2021 to 28/08/2021
11	G.Ujwala Devi, P.Kiran Reddy, P.NaveenKumar, J.Sai Kumar, B.P.Madhusudhan	ARM based smart energy management system for home automation, Material Today: Proceedings	Online	April2022
12	N.Umakanth, M.S.Shekhawat, B.T.P.Madhav, RKNR Manepalli, N.RangaBabu, T. Satyanarayana	Convective Syatem over Sami Region on 2 nd October 2013, AIP conference proceedings	Online	May2022
13	N.Umakanth,N.Ranga Babu, B.T.P. Madhav, N.Krishna Mohan, T.Satyanarayan a, M.C.Rao	Rainfall Activity over Vijayawada region during 2019, AIP Conference Proceedings	Online	May2022

FDPs / Workshops Organized

Academic year	Name of Event	Duration	Funded
2025-26*	Report on Guest Lecture on AI-Augmented VLSI/SoC Design: From Research to Real-World Innovation Organized Under AICTE Distinguished Professionals Scheme on 27th Jan,2026	27-01-2026	College
	Report on One Day Hands on Training Program on IoT Fundamentals on 26th July,2025	26-07-2025	College
2024-25	Report on one-week Hands-On Training Program on "VLSI Universal Verification Methodology	03-03 -2025 to 08-03-2025	College
	45-Day work shop on Introduction & Programming on ARM Processors	02-12-2024 to 18-01-2025	College

	One Week Hands-On Training Program on “VLSI DESIGN	05.08.2024 to 10.08.2024	
	3-Days workshop on “Programming & Interfacing with Arduino	09-09-2024 to 11-09-2024	
	5-Days workshop on “Building IoT Solutions using Embedded Systems”	17-02-2025 to 21-02-2025	College
2023-24	One Week FDP on "Deep Dive in to IOT Technologies and Applications"	10-02-2025 to 14-02-2025	College
	Exploring the Synergy between computer Architectures and FPGA implementation	07.10.2023	
	one-week Industrial Training Program on “VLSI Design and Verification Concepts	12-09-023 to 19-09-2023	
	One-week workshop on “Exploring Embedded Systems with Raspberry Pi Pico	18-03-2024 to 23-03-2024	

Academic year	Name of Event	Duration	Funded
2022-23	Design and Implementation of advanced VLSI Architectures”	13.03.2023 to 17.03.2023	College
	PCB Circuit Design	27.03.2023 to 29.03.2023	College
	One week workshop on Embedded Systems	05.12.2022 to 24.12.2022	College
	Three-Day workshop on PCB Design	04.07.2022 to 06.07.2022	College
2021-22	Design Thinking: From Insights to Viability for Engineers	06.12.2021 to 10.12.2021	ATAL
	A Five Days workshop on “IoT	21.03.2022 to 25.03.2022	APSSDC
	One Day workshop on Arduino based Circuit Design	08-10-2021	College
	Three Day workshop on PCB Design	01 March 2021 to 03 March 2021	College

2020-21	AICTE Sponsored STTP on “Mixed Signal Design Approaches for Artificial Intelligence Processors	01 March 2021 to 06 March 2021	AICTE
	AICTE Sponsored STTP on “Mixed Signal Design Approaches for Artificial Intelligence Processors	01 February 2021 to 06 February 2021	AICTE
	AICTE Sponsored STTP on “Mixed Signal Design Approaches for Artificial Intelligence Processors	28 December 2020 to 3rd January 2021	AICTE
	Overview of MEMS Devices: Design Aspects & Challenges	10 October 2020	College

Books / Chapters Published

S.No	Title of the Book/Chapter	Authors	Publishers	Year	ISBN
1	Gundala Srinivasulu, Mohammed Mahaboob Basha, V. Madhurima	EDP-Efficient Level Shifters for Super Threshold Voltage Level Shifting Applications (Pages: 165-189)	Wiley , Scrivener Pubisher	28-08-25	9781394275168
2	P. Lachi Reddy, Srinivasulu Gundala, Mohammed Mahaboob Basha,	Exploring CMOS, PTL and GDI Logic Families Based One Bit Full Adder and Subtractor Circuits in Subthreshold Region for Energy and EDP Efficient Applications (Pages: 229-266)	Wiley , Scrivener Pubisher	28-08-25	9781394275168
3	Pavani Kollamudi	Technology Behind Junctionless Semiconductor Devices in Book Field Effect Transistors	Wiley	March 2025	9781394248506 Indexed in Scopus

4	Satyanarayana Talam, Kamal Phaneendra Avula, Sameer Syed, Snigda Battula	Fabrication techniques for microfluidics devices	Academic Press	November 2024	9780443134548 Indexed in Scopus
5	Venkat Rao Pasupuleti, Shaik Ayeesha, Gopi Venkata Sai, Penumaka Kadhana	A Comprehensive Framework on Emotion-Aware Stress Detection using IoT and Machine Learning	IGI Global	August 2024	9798369337394 Indexed in Scopus
6	B. Rambabu, B.Purnachandra Rao, M. Vardhan Kumar, I.Veera Reddy	Design and develop autonomous braking and intelligent collision detection system by using Arduino for Railways	Taylor & Francis	March 2025	9781003559139
7	Rambabu Busi, B.Kalyan Venkat Sai Ch.Anand, G.Venkata Lakshmi	Remote asthma Patient health monitoring system by using IOT technology	Taylor & Francis	March 2025	9781003559139
8	M.Sivasankara Rao, Patnala Soma Sumanth, Kanasani Satvika, Guguloth Vasanth Kumar	Design of low power sense amplifier using cadence GSDK 45nm technology	Taylor & Francis	March 2025	9781003559139
9	M.Sambasiva Reddy, E Manohar Reddy, S Kusuma Kumari, P Raja SaiVarshith	Predicting Traffic Flow in Real Time using Machine Learning	Taylor & Francis	March 2025	9781003559139
10	Ravi Kumar K, P. Meghana,	IoT-Based Alert system for Alcohol Detection	PVP & The Institution of Engineers (India)	November 2024	978-81-981949-7-8

	V.Sesi Kala, Ch.G.Sastry, P.Reeva				
11	Ravi Kumar K, Chalavadi Meghana, Madu Anusha, Shaik Shakeela	IOT based Automatic Tollgate Collection System	PVP & The Institution of Engineers (India)	November 2024	978-81-981949-7-8
12	Pavani Kollamudi	Technology Behind Junctionless Semiconductor Devices in Book Field Effect Transistors	Wiley	March 2025	9781394248506 Indexed in Scopus

S.No	Title of the Book/Chapter	Authors	Publishers	Year	ISBN
1	Book Series: Advances in Transdisciplinary Engineering/ Alive Human Detection and Health Monitoring using IoT based Robot	Dr.Y.AmarBabu	IOSPress	2023	978-1-64368-360-7
2	Studies on Stability Properties of Polymer Thick Film Resistors	PooraiiahBilla, SrinivasaRao Y	Lambert Academic Publishing	2022	978-6204982656
3	Study on Energy Harvesting Efficiencies of Piezoelectric MEMS Devices	Satyanarayana Talam, S L S Iswarya Vinjamuri, PadmajaNirmala	Lambert Academic Publishing, Germany	2022	978-620-4-75186-3
4	Basic and Advanced Multiplier Architectures	Dr. Srinivasulu Gundala M.Mahaboob Basha	Lambert Academic Publishing, Germany	2021	978-620-3-92560-9

Patents Published

S.No	Title of the Patent	Applicant/Inventor	Published / Granted	Patent Number	Year
1	Voltage Level Driven Short Circuit Aware Voltage Level Shifter for Deep Sub Micron Applications	<p><u>Applicant Name</u></p> <p>Lakireddy Bali Reddy College of Engineering</p> <p><u>Name of Inventor</u></p> <p>1.Dr.K.Yoga Prasad 2.Dr.Srinivasulu Gundala 3.Dr.K.M.Hemambaran 4.Dr.M.Mahaboob Basha 5.Dr.O.Hemakesavulu</p>	Published	202641005477 A	30-01-2026
2	A Self-Adaptive Smart Education platform based on Machine Learning, IoT, Blockchain, and Cloud Computing for Continuous Skill	<p><u>Name of Applicant</u></p> <p>1.Dr B V N R Siva Kumar 2.Prof.Khalid Ahmed Aldhoreae 3.Dr.Seema Patil 4.Dr.Shobha T 5.Dr.Rovin Tiwari 6.Mr.Sachin Mohan Sase 7.Dr.S.Janani 8.Jigarkumar Dineshbhai Patel</p> <p><u>Name of Inventor</u></p> <p>1.Dr B V N R Siva Kumar 2.Prof.Khalid Ahmed Aldhoreae 3.Dr.Seema Patil</p>	Published	202641004051 A	30-01-2026

		<p>4.Dr.Shobha T</p> <p>5.Dr.Rovin Tiwari</p> <p>6.Mr.Sachin Mohan Sase</p> <p>7.Dr.S.Janani</p> <p>8.Jigarkumar Dineshbhai Patel</p>			
3	<p>IOT-Integrated Machine Learning- Driven Graph- Optimized Medical Drone Delivery System Using Fast Root Optimization Over 6G Networks</p>	<p><u>Name of Applicant</u></p> <p>1. Dr. Anand Kumar Address of Applicant :Assistant Professor, Department of Electronics and Communication Engineering, J.N.N Institute of Engineering College, Kanaigaipair, Chennai, Thiruvallur, Tamil Nadu, 601102, India. Tamil Nadu India</p> <p>2. Dr. Prabakar D 3. Dr. Kaleeswari C 4. Senthil Kumar C 5. NareshMeruga 6. B. Priya 7. Raziyaya Khan 8. Abdhur Rahman A 9. Vuppuloori Ravi Sekhara Reddy 10. Dr. Sri Jamiya S 11. Kavirasu K 12. N. Ashalatha</p> <p><u>Name of Inventor</u></p> <p>1. Dr. Anand Kumar 2. Dr. Prabakar D 3. Dr. Kaleeswari C 4. Senthil Kumar C 5. NareshMeruga 6. B. Priya 7. Raziyaya Khan 8. Abdhur Rahman A 9. Vuppuloori Ravi Sekhara Reddy 10. Dr. Sri Jamiya S 11. Kavirasu K 12. N. Ashalath</p>	<p>Published</p>	<p>202641016749 A</p>	<p>20-02-2026</p>
4	<p>An IoT-Enabled System for Baggage Handling in Airports and Method of</p>	<p><u>Applicant Name</u></p> <p>KoneruLakshmaiah Education Foundation</p>	<p>Published</p>	<p>202541062294 A</p>	<p>11-07-2025</p>

	Operation	<u>Name of Inventor</u> 1.Venkata DayaSagarKetaraju 2.A.Narendra Babu 3.K.Raghava Rao 4.M.Janaki Ramaiah			
5	Eco-Smart Solar Drying with Adaptive Climate Sensing and Power Flexibility	U Srinivasa Rao K Kalpana Thota Sri Lakshmi Shaik Shafiya Sultana Kadiyala Sudhakar P Surendra Kumar N Naga Swathi Kola Balavani Kommalapati Rajesh Rajulapati Pushpa Sree Pitta Sneha Likhita	Published	202541035299 A	09-05-2025
6	Advanced Ear Biometrics Authentication using EfficientNET CNN for enhanced Security	Niraj Nagrale Mohit Raikwar Dr.Pushpendra Anuragi Dr.Nikhat Raza Khan Dr.Sayyad Jilani Dr.B.V.N.R. Siva Kumar Sanjay Mirchandani Dr.SrichetaParui	Published	202421069667 A	25-10-2024
7	Device for Testing Integrated Circuits	Dr.M.Mahaboob Basha Dr.P.Lachi Reddy	Published	421143-001	25-07-2024

		Dr.S.Vijayakumar Dr.G.Srinivasulu Dr.V.Madhurima Ms.M.Bharathi G.SAndhyakumari			
S.No	TitleofthePatent	Applicant/Inventor	Published / Granted	PatentNumber	Year
1	AnElectricVehicle Safety Evaluation Device	Dr.C.SateeshKumar Reddy Mr.AnandbabuGopatoti Dr.PoornaiahBilla Dr.P.RanjithKumar.	Published	377316-001	15-03-2023
2	PatientComputerfor controlled Individualized Medication	Dr.P.Ranjith Kumar Dr.C.Sateesh Kumar Reddy Mr.AnandbabuGopatoti Dr.PoornaiahBilla	Published	377319-001	03-03-2023
3	Car Dash Camera DeviceWithIntegrated GPS System	Mr.AnandbabuGopatoti Dr.B.Poornaiah Dr.P.Ranjith Kumar Dr..SateeshKumarReddy	Published	377318-001	03-03-2023
4	lot Based UV MonitoringSensor Device	Dr.PoornaiahBilla Dr.C.Sateesh Kumar Reddy Mr.AnandbabuGopatotiDr. P.Ranjith Kumar.	Published	377321-001	03-03-2023
5	LightEmittingDiode Module	Dr.PoornaiahBillaDr.P.Ra njith Kumar Dr.C.Sateesh Kumar Reddy Mr.AnandbabuGopatoti	Published	377320-001	16-03-2023
6	An Artificially intelligent Smart Medicalsystemusing soft computing	Applicant: Lakireddy Bali Reddy CollegeofEngineering (Autonomous),	Published	202341002403	17-02-2023

		Dr.B. Poornaiah, Dr.T.Satyanarayana,			
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Details of Sponsored Research

No. of Research Projects: 02

S.No.	Faculty with Designation	Title of the Proposal	Funding Agency-Scheme	Amount Sanctioned & Date	Amount received in Lakhs.& Date	Duration & Status
1.	Dr.B.Poornaiah	Design and Characterization of a Carbon Nanotube (CNT) Strain Sensor for Prosthetic Implants	SERB	16.7178 On 01-12-2023	10.97 Received on 14-03-2026	36 Months &On Going
2.	Dr.B.Rambabu	Development and Characterization of Miniaturized Piezoresistive Cantilever for Biosensors	SERB	27.96332 14-02-2023	8.00 14-02-2023	36 Months &On Going

Proposal Submitted

Academic Year	NameofTheFaculty	TitleofProposal	Scheme/ Agency	Amount
2025-26	Interface Engineering on Electrolyte-Oxide Interaction for label free Biosensors	Prof.E.V.Krishna Rao, Dr.S.V. Jagadeesh Chandra, Prof.Siva Rama Krishna Vanjari, Dr.P.SAnthiLatha	Advanced Manufacturing Technology	31-08-2025
2022-23	Dr.T.Satyanarayana	Emerging Trends in Micro-Electro-Mechanical Systems andFlexibleHybridElectronics forIndustrialApplications(11-12-2023 to 17-12-2023)	AV/KAR/2023/0065	25,00,000/-
	Dr.T.Satyanarayana	NovelMEMS-basedCarbon Monoxide Gas Sensors for DomesticSafety(02-05-2023)	AV/KAR/2023/0065	44.94Lakhs

	Dr.T.Satyanarayana Dr.B.Poornaiah	Design, Development and characterization of Zno based carbon monoxide MEMS Gas Sensors with Micro Hot Plates for Safety Applications	CRG/2023/007998	34,38,875/-
	Mr.B.V.N.R.SivaKumar Dr.B.Y.V.N.R.Swamy Dr.G.L.N.Murthy	Skill Development and Self-Empowerment of rural women and unemployed youth through electronic controlled fabric toys and manually operated toys	TPN/88316 (DST-SEED-SUNIL)	20,80,000/-
	Dr.Poornaiah Billa	Development and characterization of Ambipolar Carbon Nanotube Field Effect Transistor	EEQ/2022/000890	9,60,000
2021-22	Dr.G.Srinivasulu (PI) Dr.Y.AmarBabu(Co-PI)	Design and Development of Test Chip fabrication for Battery Power Management System of Portable Electronic Gadgets	MeitY	17,9000/-
	Dr.B.Poornaiah, Dr.K.Ravi Kumar, Dr.E.V.KrishnaRao, Dr.P.RakeshKumar,	Technology Enabled Co-Working Community Center for the Empowerment and Economic upliftment of rural SC people	DST-STI Hub for SC Community	17,9000/-
	Dr.B.Y.V.N.R.Swamy, Dr.B.SivaHariPrasad, Smt.B.Rajeswari	(Co-PI)		
2020-21	Dr. T. Satyanarayana	Design Optimization and MEMS based Piezoelectric Generators for Powerful Traffic Lights	SERB-CRG	28,64,000/-
	Dr. T. Satyanarayana	Design and development of continuous liquid level sensor using fiber optic technology for LH ₂ and LO _x	Liquid Propulsion Systems Centre (LPSC), ISRO- Respond Basket 2021	10,23,500/-
	Dr. B. Poornaiah Dr.T.Satyanarayana	Science Technology and Innovation Hub in Lakireddy Bali Reddy College of Engineering (A), Mylavaram, Krishna District, Andhra Pradesh State	STI Hub for SC Community (DST)	54,80,000/-
	Dr.M.Venkata Sudhakar Dr.Y.AmarBabu Dr. EV.Krishna Rao	Design of VLSI based Pulse Shaping Circuits for Implementing of Long-Reach Fiber to the Home (FTTH) optical communications systems	AICTE(RPS)	7,67,000/-
	Dr.A.NarendraBabu	Waste to Power: Mini plant in the campus	DST	20,65,000/-
	B.V.N.R.Siva Kumar Dr. Satyanarayana Talam Dr.Seelam Pichi Reddy Mr. Chaitanya Bhavaraju	Development of Lower Limb Exoskeleton for Rehabilitation Application	DST	24,95,000/-
	Dr. P.Lachi Reddy	MEMS based Sensors and Applications	AICTE	3,00,000/-

Research Colloquiums from VLSI Group

Academic Year(2024-25)			
S.No	Date	FacultyName	TitleofPresentation
1	18-08-2022	Dr.T. Satyanarayana	Journal Validation and IPR
2	06-01-2023	Mr.KV Ashok	Implementation of Projects using Keil & ARM Processors
3	06-01-2023	Mr.N Dharmachari	Implementation of Projects using Keil & ARM Processors
4	24-03-2023	Mr.G.Venkata Rao	Design and Implementation of Machine Learning (ML) based Network-on-Chip (NoC) on FPGA
5	31-03-2023	Smt.M.Ramya Harika	Design for Testability (DFT)-Introduction, Scan Insertion, Scan Compression
6	31-03-2023	Smt.K.Balavani	Design for Testability (DFT)-ATPG, Simulation, JTAG, MBIST
Academic Year(2024-25)			
1	17-06-2022	Dr.B.Poornaiah	Reliability of polymer thick film resistors by using pulse voltage trimming method.
2	10-06-2022	Dr.B.Poornaiah	Reliability of polymer thick film resistors by using pulse voltage trimming method.
3	10-06-2022	Dr.G.Srinivasulu	Discussion on start-up of chip design proposal.
4	07-01-2022	Dr.P.Lachi Reddy	Automatic Attendance System
5	03-12-2021	Dr.G.Srinivasulu	Double Current Limiter High Performance Voltage Level Shifter for IoT Applications
6	05-11-2021	Dr.Y.Amar Babu	Implementation of Communication Protocols
Academic Year(2023-24)			
1.	15/07/2019	Dr.Y.Amar Babu	Machine learning on FPGA
2.	15/07/2019	Dr.P.Lachi Reddy	A unified approach to detect and distinguish hardware Trojans and faults in SRAM based FPGA
3.	15/07/2019	Dr.G.Srinivasulu	Development of voltage level shifter using transmission gates
4.	03/08/2019	Mr.B.V.Siva Kumar	Development in lower limb mobile Exoskeletons
5.	03/08/2019	Mr.G.Venkata Rao	Effect of Interfacial Layer on Leakage currents in Germanium MOS Devices
6.	31/08/2019	Smt.T.Kalpna	Carbon Nanotubes
7.	31/08/2019	Mr.R.Hari Kishan	Reliability-Aware Test methodology for short channel faults in On-Chip Networks
8.	23/09/2019	Mr.G.Venkat Rao	FPGA Based Machine Learning
9.	23/09/2019	Mr.K.V.Ashok	Fast Energy Efficient Radix-16 sequential Multiplier
10.	04/01/2020	Dr.P.Lachi Reddy	Reversible Gates

11.	04/01/2020	Dr.G.Srinivasulu	Energy and areaefficient Level shifterforMulti-VDDSystems.
12.	08/02/2020	Mr.G.VenkataRao	ReversibleGates
13.	08/02/2020	Mr.K.SasiBhushan	ComparisionofReceiver Architecturein5G

Student Projects

Academic Year: **2024-25**

Batch	Students	Title of Project	Area
A3	21761A0402	Fish pond monitoring through IOT	ES
	21761A0458		
	21761A0463		
A4	21761A0434	Ultra-Low-Power CMOS Current and Voltage Reference Circuit With Low Line Sensitivity and Wide Temperature Range	VLSI
	21761A0446		
	21761A0451		
A10	21761A0407	Advanced Dual Axis Solar Tracking with environmental monitoring and energy analytics	ES
	21761A0428		
	21761A0454		
A12	21761A0429	Accident Detection and Environmental Monitoring System Using Road Studs as Sensor Nodes	ES
	21761A0444		
	22765A0407		
A13	21761A0414	Design and Analysis of Mbps 128 Bit Processor	ES
	21761A0450		
	21761A0455		
A18	21761A0422	Energy Efficient Dadda Multiplier Design using an Approximate 4:2 Compressor in Verilog HDL	VLSI
	21761A0432		
	21761A0435		
A19	21761A0415	Intelligent wheel chair: combining mobility , safety and health surveillance	ES
	21761A0421		
	21761A0442		
A21	21761A0401	Design And Analysis Of Stripped Circular Patch UWB Antenna For WIFI/WIMAX/WLAN/ C Band Applications	A,E
	21761A0405		
	21761A0427		
A22	21761A0431	Design of Floating Point Multiplier with exact Algorithm	VLSI
	21761A0433		
	21761A0452		
A23	21761A0413	Real-Time Helmet Compliance and Triple Riding Violation Monitoring System Secure and Fault-Tolerant Block Memory Design For IOT Applications	ES
	22765A0406		
	21761A0411		

Batch	Students	Title of Project	Type
B1	21761A0465	FPGA-Based Real Time Automation System For Optimizing Algae Cultivation For 3rd Generation Biofuel Production	VLSI
	21761A0467		
	21761A0475		
	21761A0477		

B2	21761A0474	Speed-Efficient 32-bit Wallace Tree Multiplier with Kogge-Stone Adder: A Reversible Logic Approach	VLSI
	21761A0498		
	21761A0499		
	21761A04C6		
B3	21761A0468	Smart iron box with automatic lifting mechanism	ES
	21761A04B5		
	22765A0414		
B4	21761A0480	Implementation of wide range voltage level up shifter for SOC applications	VLSI
	21761A04B6		
	21761A04B8		
B6	21761A0470	Efficient 4- parallel Polyphase Even Length FIR Filter using Brent-King Adder and Booth Multiplier	VLSI
	21761A0489		
	21761A04A6		
B7	21761A0497	Design and analysis of Novel MEMS cantilever Biosensor for Tuberculosis Detection	MEMS
	21761A04C5		
B11	21761A0494	Advanced Flood Monitoring and Prevention Through Machine Learning and Internet Of Things	ES
	21761A04A2		
	22765A0412		
B12	21761A0482	Smart Office Automation Using IOT	ES
	21761A04B3		
	21761A04C3		
B13	21761A0485	Area-Efficient And High-Speed Implementation Of Three - Operand Binary Adder	VLSI
	21761A0488		
	21761A04B9		
B15	21761A0491	Low Power Borrow select Subtractor using BLO and RBHS Techniques for area constrained Design	VLSI
	21761A04A4		
	21761A04B2		
B20	21761A0471	Optimized 16-Bit Brent Kung Adder using Carry look ahead for Efficient computation	VLSI
	21761A0495		
	21761A04A7		
B22	21761A0483	A warning system for detection of child in a locked vehicle	ES
	21761A04B7		
	21761A04C8		
B23	21761A0487	Design and Simulation of Hybrid filter for Audio applications using FPGA	VLSI
	21761A04C2		
	21761A04C7		
B24	21761A0472	Verification Of Low precision Arithmetic for AI Coprocessor Using Universal Verification Methodology UVM	VLSI
B25	20761A04A9	WIFI Controlled Car	ES

Batch	Students	Title of Project	Type
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C1	21761A04F0	Highly Secured Smart Voting System	ES
	21761A04H9		
	21761A04I9		
C4	21761A04G6	IoT-Based Soldier Safety System Leveraging LoRa For Real-Time Monitoring	ES
	21761A04J0		
	21761A04J3		
C5	21761A04D0	A low power and high-speed voltage level shifter based on a regulated cross-coupled pull-up network	VLSI
	21761A04E3		
	21761A04H2		
C6	21761A04F5	Smart Irrigation System using Deep Neural Networks	ES
	21761A04G2		
	22765A04I6		
C12	21761A04D5	Autonomous Robot	ES
	21761A04F8		
	21761A04G3		
C16	21761A04D1	IoT Based Smart Glove For Personalized Assistance To Dumb And Elder People	ES
	21761A04D2		
	21761A04E7		
C17	21761A04E9	Anti Theft System for ATM's Using IOT Technology	ES
	22765A04I9		
	22765A0420		
C20	21761A04F3	Health Monitoring System with Real-Time Data Visualization and Medicine Suggestions	ES
	21761A04G9		
	21761A04H6		
C21	21761A04D7	Intelligent Driver Assistance-detecting drowsiness and tracking of vehicle Using IOT	ES
	21761A04I0		
	22765A04I7		
C22	21761A04F6	Smart Vehicle Speed Control System Using Esp32 and Vision- Based Traffic Sign Recognition	ES
	21761A04I1		
	21761A04I1		
C23	21761A04E8	IOT Based Health Monitoring System	ES
	21761A04F2		
	21761A04F7		

A.Y:2023-24

S.No	Title of the Project	Type	Relevance with POs and PSOs		Area of the Project
			POs	PSOs	
Section - A					
1.	Sensor based home automation system for autonomous control	A,B,H	PO1, PO2, PO4, PO5, PO7, PO8,PO9, PO10, PO11, PO12	PSO2	Embedded
2.	Smart Glove	A,B,H	PO1, PO2, PO4, PO5, PO7, PO8,PO9, PO10, PO11, PO12	PSO2	Embedded
3.	Design of smart unstaffed self checkout with an AI-enabled automated billing system	A,B,H	PO1, PO2, PO4, PO5, PO7, PO8,PO9, PO10, PO11, PO12	PSO2	Embedded
4.	IOT based smart cradle system	A,B,S,H	PO1, PO2, PO4, PO5, PO7, PO8,PO9, PO10, PO11, PO12	PSO2	Embedded
5.	Leaf disease detection and pesticide spraying control robot using raspberry pi	A,B,S,H	PO1, PO2, PO4, PO5, PO7, PO8,PO9, PO10, PO11, PO12	PSO3	Embedded
6.	Implementation and analysis of 6T SRAM Cell	A,B,E	PO1, PO2, PO4, PO5, PO7, PO8,PO9, PO10, PO11, PO12	PSO2	VLSI
7.	Pragabot-AI Powered Healthcare Companion of the elderly	A,B,H	PO1, PO2, PO4, PO5, PO7, PO8,PO9, PO10, PO11, PO12	PSO2	Embedded
8.	Smart water pumping for agriculture using wireless Internet of Things and machine learning	A,B,S,H	PO1, PO2, PO4, PO5, PO7, PO8,PO9, PO10, PO11, PO12	PSO2	Embedded
9.	Modelling and Optimization of MEMS based Piezoresistive sensor	A,B,E	PO1, PO2, PO4, PO5, PO7, PO8,PO9, PO10, PO11, PO12	PSO2	MEMS
10.	Design and implementation of asynchronous 4-bit up counter using 45nm technology	A,B,E	PO1, PO2, PO4, PO5, PO7, PO8,PO9, PO10, PO11, PO12	PSO2	VLSI
11.	Design of ultra low noise and high gain CMOS low frequency amplifier	A,B,E	PO1, PO2, PO4, PO5, PO7, PO8,PO9,	PSO2	VLSI

			0, PO11, PO12		
12.	Kinetic anticipation advance ure recognition through on capture and flex sensor ysis	A,B,H	PO1, PO2, , PO4, PO5, , PO7, PO8,PO9, 0, PO11, PO12	PSO3	Embedded
13.	Design of Real - Time otive Traffic Light Controller g FPGA	A,B,S,H	PO1, PO2, , PO4, PO5, , PO7, PO8,PO9, 0, PO11, PO12	PSO2	VLSI
14.	IoT based real time onous gas detection and ing using LPC2148 arm roller	A,B,H	PO1, PO2, , PO4, PO5, , PO7, PO8,PO9, 0, PO11, PO12	PSO2	Embedded
15.	Cloud based qr code security rt vehicle parking agement system	A,B,H	PO1, PO2, , PO4, PO5, , PO7, PO8,PO9, 0, PO11, PO12	PSO2	Embedded
16.	Design and Implementation oftware Defined Radio Using Q FPGA	A,B,H	PO1, PO2, , PO4, PO5, , PO7, PO8,PO9, 0, PO11, PO12	PSO2	VLSI
17.	Sign-to-Speech mentation System	A,B,S,H	PO1, PO2, , PO4, PO5, , PO7, PO8,PO9, 0, PO11, PO12	PSO1	Embedded
18.	Design of Spurious Inverter - d Level Shifter Resolving ent Disagreement and Error ection	A,B,E	PO1, PO2, , PO4, PO5, , PO7, PO8,PO9, 0, PO11, PO12	PSO2	VLSI
19.	Design and Implementation r Quality Monitoring System g FPGA	A,B,H	PO1, PO2, , PO4, PO5, , PO7, PO8,PO9, 0, PO11, PO12	PSO2	VLSI
20.	Optimization of Low-Power : Ripple Carry Adder using 9- sistors Full Adder and explore uts	A,B,E	PO1, PO2, , PO4, PO5, , PO7, PO8,PO9, 0, PO11, PO12	PSO2	VLSI
21.	Design of Hybrid Level er with Limited-current- ention and Static-current-free ation for Ultra-Wide-Range conversions	A,B,E	PO1, PO2, , PO4, PO5, , PO7, PO8,PO9, 0, PO11, PO12	PSO2	VLSI
22.	A Low Voltage 6T SRAM Cell gn and Analysis Using ence 90nm 45nm CMOS Technology	A,B,E	PO1, PO2, , PO4, PO5, , PO7, PO8,PO9, 0, PO11, PO12	PSO2	VLSI
23.	Implementation of Voltage l-Up Shifter for SOC ications	A,B,E	PO1, PO2, , PO4, PO5, PO7,	PSO2	VLSI

			PO9, PO10, 1, PO12		
24.	Smart campus integration arm and lot technologies	A,B,H	PO1, PO2, PO4, PO5, PO7, PO9, PO10, 1, PO12	PSO2	Embedded
25.	Design of power efficient proximate multiplier using enhanced adder processors	A,B,E	PO1, PO2, PO4, PO5, PO7, PO9, PO10, 1, PO12	PSO2	VLSI
26.	FPGA - Validated optimization of launch vehicle line health assessment amidst operation via Enhanced PSO	A,B,H	PO1, PO2, PO4, PO5, PO7, PO9, PO10, 1, PO12	PSO2	VLSI
27.	Implementation of the log HDL-based AES and RSA modular Algorithm on FPGA	A,B,E,H	PO1, PO2, PO4, PO5, PO7, PO9, PO10, 1, PO12	PSO2	VLSI
28.	IoT based Stress and vibration Monitoring Using Machine Learning Techniques	A,B,H	PO1, PO2, PO4, PO5, PO7, PO9, PO10, 1, PO12	PSO2	Embedded
29.	Enhanced Electronic Voting Machine with Fingerprint Authentication	A,B,H	PO1, PO2, PO4, PO5, PO7, PO9, PO10, 1, PO12	PSO2	Embedded
30.	Mobile hostel manager: streamlining accommodation Android	A,B,H	PO1, PO2, PO4, PO5, PO7, PO9, PO10, 1, PO12	PSO2	Embedded
31.	Modelling investigations on ultra-fastcapacitive rf mems switch	A,B,E	PO1, PO2, PO4, PO5, PO7, PO9, PO10, 1, PO12	PSO2	MEMS
32.	Remote Asthma Patient Health Monitoring System By Using IoT Technology	A,B,S,H	PO1, PO2, PO4, PO5, PO7, PO9, PO10, 1, PO12	PSO2	Embedded
33.	Develop and intelligent fire alarm detection and	A,B,H	PO1, PO2, PO4, PO5,	PSO2	Embedded

	Autonomous breaking system for trains by using arm controllers		PO7, PO9, PO10, PO11, PO12		
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