LAKIREDDY BALI REDDY COLLEGE OF ENGINEERING
(AUTONOMOUS)
Accredited by NAAC & NBA (CSE, IT, ECE, EEE & ME)
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

COMMUNICATION RESEARCH GROUP

Introduction:

The Communication systems research group is very active in the design of Antennas, microwave systems, optical communications, and wireless communication systems. Group members are highly experienced and qualified in their research areas. Computers and Laptops with higher speed internet connectivity are available to enable research activities in communication domain for students and faculty members. E-journals and books are available for students and faculty for accessing latest enhancement in the area of communication engineering. The department of ECE is proving advanced communication laboratory to promote the research activities in communication group. Seven faculty members with Ph.D are associated with this research group to promote the article writing skills and sponsor project proposal writing. Management encourages the faculty and students to attend conferences, workshops, and FDPs to upgrade their knowledge of the latest technologies. To promote the research work, the ECE department having the following licences softwares: Ansys HFSS 18, Matlab16 and LabView. JNTUK identified the ECE department as one of the research centers.

Objectives:

The objective of the communication research group is:

- To design and development of communication models that are useful for wired and wireless application.
- To conduct staff colloquiums for knowledge up gradation.
- To organize workshops/ Faculty development programs/Guest lecturers/seminars/ conferences by experts from Industries/Universities/NITs/IITs/etc to gain advances in communication engineering.
- To make use of facilities in the research group and produce quality publications.
- To submit proposal for generating research funding from AICTE, UGC, DST etc.
- To promote the research attitude in faculty and students by encouraging research ideas.
- Encourage the faculty and student to submit research papers in SCIE, Scopus and UGC listed journals.
- To improving the quality of the B.Tech Projects.

Members of Communications Research Group:

S.No	Name	Designation
1	Dr. M.Venkata Sudhakar	Coordinator
2	Dr.A.Narendra Babu	Member
3	Dr. K. Rani Rudrama	Member
4	Dr. B. Siva Hari Prasad	Member
5	Dr. P. Rakesh Kumar	Member
6	Dr. B.Y.V.N.R. Swamy	Member
7	Dr.V.RaviSekharaReddy	Member
8	Dr.P.Venkata Rao	Member
9	Smt.M.V.L.Bhavani	Member
10	Mr.Ch.Sivarama Krishna	Member

Major Research Equipments:

S.No	Name of the Equipment	Cost (Rs.)
1	Ansys Electromagnetics Suite 18.0	7,20,000
2	Comm.sys Teaching Bundle, 2Xusrp-2900, cable, Courseware-3Nos; Vert2450 Vertical antenna (2.4-2.5 and 4.9-5.9GHz) Dual band-6Nos; Vert 400 Vertical antenna (144MHz , 400MHz, 1200MHz) Triband-6Nos; Vert 900 Vertical antenna (824-960MHz, 1710- 1990MHz) Dualband-6Nos	8,02,872
3	Comm. Sys. Teaching bundle , 2x USRP-2900, Cables, course ware-S/N-PA2518911, PA2519655, PA2519658, 3Nos. Vert2450-Veritical antenna (2.4-2.5 and 4.9-5.9 GHz, Dual-Band)-6Nos, Vert400-Veritical antenna (Triband-144,400,1200 MHz)-6Nos, Vert900-Vertical antenna- 824-960MHz, 710-1990 MHz-Dual band-6Nos.	6,80,400
4	Microwave Bench setups -7Nos	6,26,000
5	1GHz Spectrum Analyzer -2Nos	2,93,367
6	Antenna Trainer /Micro strip Antenna Trainer Kit	82,761
7	Analog Oscilloscope 30MHz -10Nos	1,62,750
8	Lab-View-Emona kit (ETT-211)- fiber optic trainer -1No	1,45,806
9	70MHz Dual Channel DSO -2No	57,274
10	DELL VOSTRO 3268 Systems -5No	1,45,000

Outcome of Communications Research Group

		2025-26	2024-25	2023-24	2022-23	2021-22	2020-21
Journals	**SCI/ESCI**	01*	05	03	05	01	01
	SCOPUS	00	01	07	03	00	04
	UGC	00	00	00	00	00	00
	Paid	00	00	00	00	01	00
Conferences		02*	04	05	04	01	02
Books Published		00	05	00	02	00	01
Patents Published		01*	00	01	03	01	00
Research Colloquiums		00	00	00	08	04	02
Project Proposals Submitted		00	00	00	03	02	02
Project Proposal Sanctioned		00	00	01	00	00	00

JOURNALS

International Journals done by the Faculty in the period of 2025-2026*

1. Siva Hari Prasad Bondili, V.N. Koteswara Rao Devana, SarithaVanka, V.N. SukanyaDoddavarapu, Taj Mohammad, Vishnu Vardhana Reddy Karna, SrideviGamini, Savanam Chandra Sekhar, Dalia H. Elkamchouchi, "Compact polyimide Fan-Shaped Multi-Slotted Wideband Flexible Antenna for Sub-6 GHz IoT Applications, in Wireless Personal Communications, January 2026, **https://link.springer.com/article/10.1007/s11277-026-11920-w**

International Journals done by the Faculty in the period of 2024-2025

2. Srinivasa Rao Ghali, B. Prudhvi Nadh, Prathipati Rakesh Kumar, Moath Alathbath, B.T.P. Madhav, "Design and optimization analysis of Srichakra Shaped Conformal Antenna for off-bodyody communication applications" in Wireless Personal Communications, December 2024, ISSN:1572-834X, IF:1.9, https://doi.org/10.1007/s11277-024-11708-w

3. Kodali Rani Rudrama, Vallabhuni Tulsi Naga Kalyan, Bachalakuri shini, Marampudi Vamsi, "Design and Analysis of a Triple-Band Stacked T-Polyimide Antenna for WBAN Applications" in Progress in Electromagnetics Research C, 155, 177-187, May 2025, ISSN:1937-8718 http://dx.doi.org/10.2528/PIERC25021403

4. Mohammed Mahaboob Basha, Pendli Pradeep, Srinivasul Gundala, 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

5. B.Prudhvi Nadh, Banothu YVNR Swamy, Yarlagadda Ramakrishna, D Anveshini, Srinivasa Rao Kandula, Lokesh Raju V, Priyanka Das, BTP Madhav, "Design of Compact true wireless stereo (TWS) antenna in earphones for wearable communication applications" in Engineering Research Express, 7(2025) 015322, January 2025, https://doi.org/10.1088/2631-8695/ada873

6. 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

7. Muppidi Venkata Sudhakar, "Distortion-tolerant on-off keying preemphasis signal transmission for a 10Gbps indoor visible light communications" in Journal of Optical Communications, September 2024, ISSN: 2191-6322, https://doi.org/10.1515/joc-2024-0160

International Journals done by the Faculty in the period of 2023-2024

8. Pendli Pradeep, Mohammed Mahaboob Basha, Srinivasulu Gundala, Javed Syed, "Development of Wearable Textile MIMO Antenna for Sub-6 GHz Band New Radio 5G Applications" in Micromachines, 15(5), May 2024, ISSN: 2072-666X, H-Index-78, I.F.-3.4,

https://doi.org/10.3390/mi15050651

9. Haritha Thotakura, Y.V.N.R. Swamy, K.V.Vineetha, B.T.P. Madhav, Susipta Das, “Design and development of square stub loaded band pass filter with quality factor analysis” in Journal of Instrumentation, 19, May 2024, ISSN: 1748-0221, H-Index-88, I.F.-1.3, https://doi.org/10.1088/1748-0221/19/05/P05019

10. M.Venkata Sudhakar, Rajini G.K, “ Effect of the fiber bragg grating based dispersion control on the transmission length of pico second optical pulses in a single mode fiber link” in Nonlinear Optics, Quantum Optics, 59(3-4), May 2024, 263-271, ISSN: 1543-0537, H-Index-22, https://www.oldcitypublishing.com/journals/nloqo-home/nloqo-issue-contents/ nloqo-volume- 59-number-3-4-2024/21616-2/

11. Srinivas Rao Pasumarthi, MVS Prasad, V Ravi Sekhara Reddy, “Triple Band-Notched UWB Planar Monopole Antenna using a circular slots” in Telecommunications and Radio Engineering, ISSN:1943-6009, https://www.dl.begellhouse.com/fr/journals/0632a9d54950b268,forthcoming,51218.html

12. M.Satish Kumar, Sivasubramanyam Medasani, Penchla Reddy Sura, Tathababu Addepalli, Jetti Chandra Sekhar Rao, J Prasanth Kumar, B.Y.V.N.R. Swamy, A.L. Siridhara, “Design of Implantable Antennas for Biomedical Applications” in Telecommunications and Radio Engineering, 83(7), 2024, ISSN: 1943-6009, https://dl.begellhouse.com/fr/journals/0632a9d54950b268,09f4ee5f2cfc4b1f,4c0caafc136be69c.html

13. Penchala Reddy Sura, Padmaja Nimmagadda,Ch Jyotsna Rani, Tathababu Addepalli, Jagadeesh Babu, B.Y.V.N.R. Swamy, A.L.Siridhara, G. Jagadeeswar Reddy, An Asymmetrical PSI-Shaped Multiband Antenna for Wireless Applications, in Telecommunications and Radio Engineering, 83(5), 1-10, 2024, ISSN: 1943-6009, http://doi.org/10.1615/TelecomRadEng.2024051727

14. Pasumarthi Srinivasa Rao, Bondili Siva Hari Prasad, Jagabathuni Kavitha, Uppala Jayaram, UWB Antenna with Triple Band Notch Characteristics, Telecommunications and Radio Engineering, 83(1), October 2023, H-Index-22 ISSN:1943-6009, 53-64. https://doi.org/10.1615/TelecomRadEng.2023049754

15. Prathipati Rakesh Kumar, Pamarthi Sunitha, Makkapati V.S.Prasad, Compact Reconfigurable Patch Antenna for Wireless Applications, Progress in Electromagnetics Research C, 138, October 2023, ISSN:1937-8718, 161-174 , https://doi.org/10.2528/pierc23090102

16. P.Srinivasa Rao, B.Siva Hari Prasad, Jagabathuni Kavitha, Uppala Jayaram, “A Multi-Slot UWB Monopole Antenna with Dual Band Notch Characteristics”, in Progress in Electromagnetics Research C, 138, 79-90, 2023 , ISSN: 1937-8718, https://*doi*.org/10.2528/PIERC23071401

17. M.Venkata Sudhakar, G.Rajani, “Distortion Managed directly modulated on-off keying signal transmission for 10 Gbps visible light communication using electrical filtration” in Journal of optical Communications, July 2023, ISSN:2631-8695,H-Index-33, October 2023, https://doi.org/10.1515/joc-2023-0179

International Journals done by the Faculty in the period of 2022-2023

1. Investigations on Complementary Split Ring Resonator(CSRR) array integrated printed conformal band pass filters for modern wireless communication applications, KV.Vineetha, **P.Rakesh Kumar, A.NarendraBabu**, J. BramaiahNaik, BTP Madhav, Sudipta Das, Journal of Instrumentation, 17, Oct-22, 10043, 1748-0221

2. Automotive communication applications based circular ring antenna with reconfigurability and conformal nature, Tirunagari Anil kumar, B.T.P. Madhav, M. Venkateswara Rao, B. Prudhvi Nadh, **P. Rakesh Kumar**, International Journal of Communication Systems, Oct-22, 1099-1131.

3. Implementation of 23 Gbps optical wireless link for 750 km inter-aircraft communications, **M.Venkata Sudhakar**, G.K. Rajani, Engineering Research Express, 5(1) February 2023, ISSN: 2631-8695

4. Polyimide-based flexible antenna for Telemedicine and wireless applications, **Prathipati Rakesh Kumar, B.Y.V.N.R. Swamy, B. Siva Hari Prasad**, K. Rama Krishna, A. Narendra Babu, Potula Sree Brahmanandam, in Recent Advances in Electrical & Electronic Engineering, 16 (4), December 2022, 10.2174/2352096516666221201095009, 426-435, 2352-0965

5. A Novel approach for Wearable Antenna Design for Biomedical applications, K**.Rani Rudrama**, G.Catherine Christina, R. Teja, P.Niteesh Kumar, M. Anush, K.Srinivasa Rao, Transactions on Electrical and Electronic Materials, Aug-22, 2092-7592

6. Mutual Coupling Reduction in 4x4 MIMO Antenna, Pasumarthi Srinivasa Rao, Kamili Jagadeesh Babu, **Bondili Siva Hari Prasad**, in Telecommunications and Radio Engineering,82(5), 47-57, April 2003, ISSN: 0040-2508, 47-57.

7. Implementation of 10 Gbps optical wireless link for 200 Km inter-aircraft optical communications, **Muppidi Venkata Sudhakar**, G. Rajini,Journal of Optical Communications, December 2022, ISSN: 2191-6322

8. Design of electromagnetic cloak with sequentially connected rectangular split ring resonators for S-band applications, K.Srilatha, BTP Madhav, Krishna J, **B.Y.V.N.R.Swamy**, Anil Badis,AIMS Electronics and Electrical Engineering, 6(4), Oct-22,385-396, 2578-1588

International Journals done by the Faculty in the period of 2021-2022

1. An efficient low complexity compression based optimal homomorphic encryption for secure fiber optic communication, D.Venu, A.V.R. Mayuri, S. Neelakandan, **G.L.N. Murthy**, N. Arulkumar, Nilesh Shelke, Optik, 252,(February 2022), 168545, 0030-4026 (Print), 1618-1336 (online)

2. Design of 2-port MIMO Antenna for 5G Communications, P.Venkateswara Rao, **Ch.Siva Rama Krishna**, M.Sambasiva Reddy, S. Barathi, Ashwini, 2021(6),(July 2021),4970-4977, 0011-9342 (Print)

International Journals done by the Faculty in the period of 2020-2021

1. Guruva Reddy, M. Madhavi, **P. Rakesh Kumar** " Compact slotted multiptch antenna with defected ground structure for wireless communication" in Journal of Physics: Conference Series, December 2020, ISSN: 1742-6596 (**SCOPUS Journal)**
2. N. Bhushan Babu, **E.V. Krishna Rao**, KSN Murthy, "Mobile Cluster Head based Routing Protocol to Improve Lifetime of Wireless Mesh Network" in Journal of Green Engineering, PP: 11360-11370, November 2020 (**SCOPUS Journal)**
3. N. Bhushan Babu, **E.V. Krishna Rao**, KSN Murthy, "Minimum Cost, Minimum Interference and Minimum Load (M3) Gateway Deployment Algorithm for Multi- Radio Multi-Channel Wireless Mesh Networks" in International Journal of Engineering Research and Technology, No. 12, November 2020, pp. 4222-4229,**(SCOPUS Journal)**
4. N. Bhushana Babu, **E.V. Krishna Rao**, K.S.N. Murthy "Inter-Gateway Handoff Management using Ant Colony Optimization (ACO) for Wireless Mesh Networks" in International Journal of Engineering Trends and Technology, November 2020, ISSN: 2231-5381, (**SCOPUS Journal)**
5. D. Ram Sandeep, N. Prabhakaran, B.T.P. Madhav, K.L. Narayana, **P. Rakesh Kumar,** " System Investigation from Material Characterization to Modeling of Jute-Substrate-Based Conformal Circularly Polarized Wearable Antenna" in Journal of Electronic Materials", October 2020, ISSN: 0361-5235, DOI: 10.1007/s11664-020-08536-6 , (SCI Journal)

CONFERENCES

Conferences Attended by the Faculty in the period of 2025 -2026

1. M.Sambasiva Reddy,Tejonder Kaur, K DhanaSree Devi, Gurpreet Kaur, Ankita, MukeshSoni, "A Survey of Applications for wireless sensor networks in Smart Cities", in International Conference on Technology Advances for Green Solutions and Sustainable Development (ICT4GS-2024), during 09-08-2025 to 10-09-2025 at NIST University, Berhampur, Odisha, India, (Online October 2025), **https://link.springer.com/chapter/10.1007/978-3-031-94997-5.**

2. **N.Dharmachari** Sai VyshnaviDanda, 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**

Conferences Attended by the Faculty in the period of 2024 -2025

3. V.L. Bhavani Maddirala, Divya Chaturvedi, Arvind Kumar, Ramesh Reddy Bojja, A QMSIW based antenna sensor for breast tumor detection, in 3 rd IEEE Microwave antenna amd propogation conference (MAPCON-2024) during 09-12-2024 to 13-12-2024 at Novotel HICC, Hyderabad, India organized by IEEE MTT/AP/EMC Society Hyderabad Jt.Chapter, ISBN:979-8-3503-7969-3 (Online March 2025), https://doi.org/10.1109/MAPCON61407.2024.10923142

4. B.Y.V.N.R. Swamy, Teladala Chanakya, Karedla Sri Vijay Kumar, Jetipiti Sravani (20761A04F0), "Design of 4X4 MIMO Antenna for 5G applications" in Asia Pacific Conference on Innovation in Technology (APCIT 2024) during 26 to 27 July 2024 at Vidyavardhaka College of Engineering, Mysuru. (Online September 2024), ISBN: 979-8-3503-6153-7, https://doi.org/10.1109/APCIT62007.2024.10673679

5. M. Sivasasankar Rao, M.Sandeep, D.Vanaja, D. Ramcharan, "Design of Wearable Patch Antenna using Wireless Body Area Networks" in 2024 International Conference on Social and Sustainable Innovations in Technology and Engineering (SASI-ITE), IEEE Vizag Bay Section, Sasi Institute of Technology & Engineering, Tadepalligudem, from 23-02-2024 to 25-02-2024, (Online 29-07-2024), ISBN:979-8-3503-6079-0, 424-426, https://ieeexplore.ieee.org/document/10607094

6. K. Rani Rudrama, K. Pravallika, B. Vamsi, P. Jagadeesh, "Design and analysis of multiband circular petal flower shaped microstrip patch antenna for WLAN/WIMAX ISM band applications", First international conference on trends in Engineering systems and technologies, at Govt. Model Engineering College, Thrikakara, Kerala, from 11-04-2024 to 13-04-2024, (Online 03-07-2024)ISBN:979-8-3503-0779-5, https://ieeexplore.ieee.org/document/10576177

Conferences Attended by the Faculty in the period of 2023 -2024

7. K. Rani Rudrama, T. Devaraju, A. Prem Rathan, N. Chandra Sekhar, " Design and Analysis of wideband antenna using a new MTM slot for Wimax/ Wifi /Wlan and C-band applications" in 7 th IEEE International Conferences on Devices, Circuits and Systems, at Karunya Institute of Technology and Sciences, Coimbatore during 23-24 April 2024.

8. B.Y.V.N.R. Swamy, A. Vamsi Chaitanya, A.V. Anantha Reddy, M. Vijay Babu, "Design and Implementation of Microstrip Patch Antenna using HFSS for Medical Applications", in 6th International conference on communications and cyber physical Engineering ICCCE 2023, 28-29 April, Hyderabad, 739-746, (online February 2024) , Part of book series Lecture notes in Electrical Engineering, vol.1096, 82, Springer, ISBN: 978-981-99-7137-4 https://doi.org/10.1007/978-981-99-7137-4_72

9. B.Y.V.N.R. Swamy, Ch. Giridhar, M.Ashok Kumar, Sk. Irfan, K. Narsimha Rao, "Microstrip fractural antenna for 5G applications",in AIP Conf. Proc. 2901 (1),090002(2023), Third International Conference on Advances in Physical Sciences and Materials: ICAPSM 2022, Online December 2023,182-196, ISSN:1551-7616. https://doi.org/https://doi.org/10.1063/5.0179979

10. B.S.Hari Prasad, K.B.N. Devi Priya, B. Sai Kumar, M.Vikram, A fan shaped quad band microstrip patch antenna using defected ground structure for wireless applications, 8 th International Conference on Computing in Engineering and Technology (ICCET 2023) organized by National Institute of Technology in Patna, Bihar, India Patna, India, July 2023, 499-505, ISBN: 978-1-83953-917-6,https://doi.org/10.1049/icp.2023.1539

11. B.S.Hari Prasad, A.Amrutha, P.Harini, S.Pavan Gopal Sai, Design and Analysis of wide-band antenna using defected ground structure for wireless applications, 8 th International Conference on Computing in Engineering and Technology (ICCET 2023) organized by

National Institute of Technology in Patna, Bihar, India Patna, India, July 2023, pp-506-513, ISBN: 978-1-83953-917-6.https://doi.org/10.1049/icp.2023.1540

Conferences Attended by the Faculty in the period of 2022 -2023

1. A miniaturized metasurface based dielectric resonator antenna for wireless communications, B.Y.V.N.R. Swamy, V. Sathvika, V. Venkatesh, K. Narendra Reddy, International Conference on Signal processing and communication March 23-24 2023 Coimbatore, Online (22-05-2023), Karunya University, 979-8-3503-0077-2

2. Development of Embedded Assistive Smart Helmet for Bike riding using Intelligent process, M.Venkata Sudhakar, V. Sowjanya, V.V.RangaSai, O.Sudheer Kumar and V.Barghava, IEEE 1st International Conference on Smart and Sustainable Technologies in Energy and Power Systems SSTEPS – 2022, 7th - 9th Nov, 2022 (online May 2023)

3. Smart Routing System in Wireless Sensor Networks, Kapil Joshi, VirenderKhurana, Ch.Siva Rama Krishna, Mohammed Azam, Yashpal Sing, LalitJohari, in International Conference on Innovative Computing, Intelligent Communication and Smart Electrical Systems (ICSES-2022),at St. Joseph's Institute of Technology (Autonomous), Chennai, India July 2022, 323-328

4. Wireless Communication Design Using Neural Networks and Deep Learning, Rajesh Singh, VirenderKhurana, M.Sambasiva Reddy, RanjeetYadav, RachitJangir, DhirajKapila, International conference on Innovative Computing, Intelligent Communication and Smart Electrical Systems(ICSES-022), Organized by St. Joseph's Institute of Technology,Chennai, 15-16 July 2022. 317-322 (October 2022 Online)

Conferences Attended by the Faculty in the period of 2021 -2022

S.No	NAME	PROGRAMME	PLACE	PERIOD
1.	Parthipati Rakesh Kumar, B Siva Hari Prasad, Kudumula Srilatha and Chopparapu. Yogendr	International Conference on Intelligent Manufacturing and Energy Sustainability "A Compact Wide Band Rectangular Patch Antenna for Wireless Applications"	Malla Reddy College of Engineering and Technology, Hyferabad	24-25 June 2022

Conferences Attended by the Faculty in the period of 2020 -2021

S.No	NAME	PROGRAMME	PLACE	PERIOD
1.	Prof B. Ramesh reddy	International Conference on Intelligent computing in control and communication "**Shaped Beams from Circular Aperture Antennas**"	Aditya Institute of Technology and Management,Tekkali,Srikakulam	07 - 08, August 2020.
2.	Mr P.Rakesh Kumar	First International Conference on Advances in Physical Sciences and Materials "**Compact Slotted Multiband Patch Antenna with Defected Ground Structure for Wireless Communication**"	SNS College of Technology, Coimbatore, Tamil Nadu	13 - 14, August 2020.

Patents Published

Details of Patents –01 (2025-26)

S.No.	Patent Title	Applicants/ Inventors	Patent No.	Published date
1.	Implementation of Compact Monopole Slotted Patch Antenna System for Dual Band Wireless Communications	**Applicant Name** Ketavath Kumar Naik **Inventor Name** 1.Janam Taruni 2.Shaik ShahinaParveen 3.Settipalli Vinoothna 4.Kudumu Vara Prasad 5.Bandi Alekhya 6.**E.V.Krishna Rao** 7.Ketavath Kumar Naik	202541061487 A	11-07-2025

Details of Patents –01 (2023-24)

S.No.	Patent Title	Applicants/ Inventors	Patent No.	Published date
2.	An Implementation method for 50 GBPS 200 Km Optical Wireless Communication System using Preemphasis Technique	Dr.M.Venkata Sudhakar, Dt. Satyanarayana Talam	202441014657	08-03-2024

Details of Patents –03 (2022-23)

S.No.	Patent Title	Applicants/ Inventors	Patent No.	Published date
1.	Light Emitting Diode Module	**Dr.PoornaiahBilla,** Dr.P.Ranjith Kumar Dr.C.Sateesh Kumar Reddy Mr.Anandbabu Gopatoti	377320-001	16-03-2023
2.	T-Slits on Circular Patch Antenna System and Method to Establish IoT Applications	Applicant: Lakireddy Bali Reddy College of Engineering (Autonomous), **Ede Venkata Krishna Rao** Name of the inventor: **Ede Venkata Krishna Rao** Gadameedi Dinesh Kumar, BhukyaSrinivasarao U.V.RatnaKumari M. Sree Ram Kiran Kethavath Kumar Nayak	202241075829	06-01-2023
3.	A rectangular A-Shaped Microstrip Patch Antenna with defected Ground Structure for Wireless communications	Applicant: Lakireddy Bali Reddy College of Engineering (Autonomous), **Dr.P.Rakesh Kumar,** **Dr.E.V.KrishnaRao** Name of the inventor: **Dr.P.Rakesh Kumar,Dr.E.V.KrishnaRao**, A. Uma Maheswari, Y. Sirisha, K. Kushal Kumar, D. PavanGurudev	202341002404A	17-02-2023

Details of Patents –01 (2021-2022)

S.No.	Patent Title	Applicants/ Inventors	Patent No.	Published date
1.	A Kind of low peofile SIW cavity-Backed L-Shaped Slot Antenna	Mr.BollavathiLokeshwar, Dr.DoraiVenkatasekhar, Dr.JammalamaduguRavindranath, Mr.Katta Anil Kumar, Mrs Nagvalli Vegesna, **Dr.Y.V.N.R. Swamy**, Mrs. Kalidindi Lakshmi Divya, Mrs. D.V.N. Bharathi, Mrs. Samanthapudi Swathi	202241014976	25-03-2022

FDPS/Workshops Organized

AcademicYear	Name of Event	Duration	Funded
2024-25	Next-Generation Wireless Communication Systems: Trends, Technologies, and Future Directions	10h -14th feb 2025	COLLEGE
2022-23	"Five Day Facuity Development Programme on Advanced Communication systems	05h -09h June 2023	COLLEGE
2021-22	Five Day Faculty Development Programme on Recent Trends in Communication Systems	21th-25 June 2022	COLLEGE
2020-21	FDP on "Challenges and Advances in Communication in 5G"	14th-18th June, 2021	COLLEGE

Invited Guest Lectures

Academic year	Name of Event	Date
2022-23	GUEST LECTURE ON "Computing methods and Techniques for Computer Technology	27.02.2023
2021-22	GUEST LECTURE ON "Opportunities in Core companies"	3.04.2022

2020-21	GUEST LECTURE ON “INTRODUCTION TO ANALOG CIRCUITS	12.06.2021
	GUEST LECTURE ON “Embedded Communication Protocols”	08.06.2021

Books/ Chapters Published

S. No.	Authors	Title of the Book	Publisher	Published Date	ISBN
1.	Ch.Siva Rama Krishna, P.Livingston, S.Jaya Chandra, J.Hari Babu, K.Sai Babu	Multi-band Self-Grounding Antenna for Wireless Technologies”, in Quantum Comp. Models for Cyber & Communications in Quantum Computing Models for Cybersecurity and Wireless Communications,	Wiley	Feb 2025	978-1-394-27140-5
2.	P. Rakesh Kumar,Sk. Sameera Bhanu,Ch.Aruna,G.Yasaswini	Design and analysis of compact multiband millimeter wave patch antenna	Taylor & Francis	March 2025	9781003559139
3.	P. Rakesh Kumar,P.Dhana Lakshmi,E.Brahmendra,R.Sharon Kumar	A compact basket ball court shaped reconfigurable patch antenna for wireless applications	Taylor & Francis	March 2025	9781003559139
4.	P.Venkat Rao,Mounica Bulla, Milcah Sunayana Boyalapalli, Charan Pendam	Enhanced Data Imputation model for missing data recovery in wireless sensor networks	Taylor & Francis	March 2025	9781003559139
5.	K. Ravi Kumar,Guntaka Sri Naga Durga,Bodedla Gopi Krishna, Eda Vinay Venu Gopal, Telagathoti Harshitha, Konijetty Nagajyothi, Dubbaka Ganesh	Design and Analysis of Patch Antenna for Telemedicine	PVP & The Institution of Engineers (India)	November 2024	978-81-981949-7-8

S.No	Name of Book	Author	Publisher	Date	ISSN Number

1.	A Compact wideband rectangular patch antenna for wireless applications, Part of Smart Innovation, Systems and Technologies, Intelligent Manufacturing and Energy Sustainability, ICIMES 2022	P. Rakesh Kumar, B. Siva Hari Prasad, K. Srilatha, Ch. Yogendra	Springer	21-06-2023	978-981-19-8497-6
2.	Book: Part of the Algorithms for Intelligent Systems book series (AIS) Chapter: Simplified Design of IMC Tuned PID Controller for Integrating Process based on Maximum Sensitivity Conference: Proceedings of International Conference on Communication and Computational Technologies	VenkataSudhakar M	Springer	27-09-2022	978-981-19-3951-8_7
3.	Modeling of IOT Enabled Parking Management using Mobile Application	Dr. Venkata Sudhakar Mupidi	Lambert Academic Publishing, Germany	29-06-2021	978-620-3-92776-4

Research Colloquiums

Academic Year (2022-23)			
S.No	**Date**	**Faculty Name**	**Title of Presentation**
1.	18-08-2022	Dr. A. Narendra Babu	Awareness on Incubation, Innovation and Entrepreneurship
2.	18-08-2022	Dr. P. Rakesh Kumar	Implementation of National Innovation and Start- up Policy (NISP)
3.	03-02-2023	Mr. M. Sambasiva Reddy	Python and MatLab / Octave Based Winter Training School on "**Massive MIMO, mmWave MIMO and Spatial Modulation**".
4.	17-02-2023	Dr. P. Rakesh Kumar	LabVIEW Real Time Applications
5.	03-03-2023	Smt. K. Rani Rudrama	Design and Analysis of Fractal Antenna for Wideband Applications
6.	10-03-2023	Smt. M V L Bhavani	Innovations and Inclinations in Microwave and Millimeter wave antennas
7.	31-03-2023	Smt. M. Ramya Harika	Design for Testability (DFT)-Introduction, Scan Insertion, Scan Compression

8.	21-04-2023	Mr. Ch. Siva Rama Krish	Imlementation of BPSK using SDR

Academic Year (2021-22)

S.No	Date	Faculty Name	Title of Presentation
1.	12-11-2021	Smt. K. Rani Rudrama	A Novel Metamaterial Unit Cell Using an Interdigital Capacitor with Non Bianisotropic property
2.	10-12-2021	Dr.V.Ravi Sekhara Reddy	Design of wideband rat race coupler for microwave applications
3.	04-06-2022	Dr. M. Venkata Sudhakar	Discussion on seed money proposal.
4.	10-06-2022	Dr. A. Narendra Babu	Wearable device for physical activity and health care monitoring in sports/ celebrities people.

Academic Year (2020-21)

S.No	Date	Faculty Name	Title of Presentation
1.	03-10-2020	Dr.P.Rakesh Kumar	DESIGN OF Fractal Antennas for wireless applications
2.	03-10-2020	Mr.V.Ravi Sekhara Reddy	Miniaturized branch line coupler with Harmonic Suppression for wireless communication

Projects Sanctioned

S.No	Name of Faculty	Title of Proposal	Funding Agency	Amount In Rupees/-	Academic Year
1	**Dr. P. Rakesh Kumar** **Dr.V.Ravi Sekhar Reddy**	Wearable Antennas for Medical Applications	SEED (LBRCE)	2,05,000 /-	2023-24

Project Proposals Submitted

Academic Year	Name of The Faculty	Title of Proposal	Scheme / Agency	Amount
2022-23	Dr.A.NarendraBabu Dr.P.Rakesh Kumar Dr.V.Ravisekhara Reddy, Dr.P.VenkataRao, Dr.K.Ravi Kumar	Smart Technologies for Sustainable Smallholder Agriculture, Toys making and Smart Home	TPN/88349 (DST-SEED-SUNIL)	1,13,09,000 /-
	Dr. Rakesh Kumar Prathipati (PI) Dr.PoornaiahBilla(CO-PI) Dr.Ravi Kumar Kandagatla (CO-PI)	"STI HUB for Socio-Economic Empowerment of SC Community through Smart Home and Agro Sector Approaches"	TPN / 83453	117,16,508/ -

	Dr. B.Y.V.N.R. Swamy	Design of Wearable Antenna for Health Care	EEQ/2022/001062	33,66,000
2021-22	Dr. A. NarendraBabu	Screening of Soil Enzymes for Identification of bacterial Strains for innovative agriculture practices	ICSSR	-
	Dr P.Rakesh Kumar	Nondestructive Food Inspection Via Electromagnetic Sensing andImaging for Food quality and safety Assessment Ref No: 202021000946	SERB (EMEQ)	-
2020-21	Dr.M.Venkata Sudhakar	Design of VLSI based Pulse shaping circuits for implementing of Long-reach Fiber to the Home (FTTH) optical communications systems.	RPS Rural AQIS Application ID : 1-9292286820	7,67,000
	Dr.Y.S.V. Raman Dr. A. Narendra Babu	Smart Wheel chair with Navigation system and safety	SERB-CRG	27,70,000/-

Student Projects

2024-25			
Batch	**Students**	**Project Guide**	**Title of Project**
1	21761A0441 21761A0443 21761A0453 21761A0456	Dr.E.V.KrishnaRao	Design of an Asymetric Stair-Case CPW–Fed Octagonal patch Antenna for Wireless Communications
2	21761A0404 21761A0440 21761A0457	P.RakeshKumar	A Compact comb shaped wearable antenna for Biomedical applications
3	22765A0403 22765A0437 22765A0460	Dr.V.Ravi Sekhara Reddy	Design Of Compact Rat-Race Coupler With Harmonic Suppression For Wireless Communication
4	21761A04B4 21761A04C1 21761A04C4	Dr.B.Y.V.N.R. Swamy	Design of awearable flexible micro strip Patch Antenna For the Detection of Breast Cancer
5	21761A0478 21761A0479 21761A04A3	Dr.P.Rakesh Kumar	Design and analysis of Circular shaped wearable antenna for Biomedical applications
6	21761A0481 21761A04A8 21761A04B1	Dr.B.SivaHari Prasad	Design and Analysis of a Circular Patch Antenna (CPA) with Triple Band-Notched Characteristics
7	21761A04D9 21761A04E5 21761A04H0 21761A04H3	Dr.E.V.Krishna Rao	A Compact Design of Single Band CPW-Fed Cascaded T–Shaped Flexible Patch Antenna for Wireless Communication
8	21761A04E1 21761A04H7 21761A04I3	Dr.M.V.Sudhakar	Design and simulation of under water visible light communication for marine applications
9	21761A04F1 21761A04G4 21761A04H4	Dr.B.Y.V.N.R.Swamy	Design and Analysis of Y-shaped Tri band Antenna with DGS for 5G Communicationandmodern X-
10	21761A04G5 21761A04I4 21761A04J2	Dr.B.SivaHariPrasad	Design of Compact UWB Antenna with WiMAX/X Band Notched Characteristics
11	21761A04E0 21761A04G8 21761A04I5	Dr.K.RaviKumar	Compact CPW fractal antenna for flexibleBio-medical applicationsin ISM Band
12	21761A04H5 22765A0422 22765A0423	Dr.V.RaviSekhara Reddy	Design of Wide band Compact Rat- Race Coupler for Wireless Communication
13	21761A04D3 21761A04G1 21761A04I7	Dr.K.RaniRudrama	Design and Analysis of a Triple- B and Stacked T-Polyimide Antenna for WBAN Applications
14	21761A0439 21761A0461 22765A0405	Dr.K.RaniRudrama	Design and analysis of Wideband Split-RingIntegratedHybridFractal- shaped patch antenna for WIFI/WIMAX/WLAN/5G Midband Applications

15	21761A0401 21761A0405 21761A0427	Mr.Ch.Mallikarjuna Rao	Design And Analysis OfS tripped Circular Patch UWB Antenna For WIFI/WIMAX/WLAN/ C Band Applications
16	21761A04G0 21761A04H1 22765A0418	Smt.M.RamyaHarika	Design and analysis of a Triband stepped gear - shaped rhombic Patch antenna for C,X-band applications

A.Y.2023-24			
S.No	**Title of Project**	**Regd.No**	**Name of the guide**
1	Design and Analysis Of Compact Multiband-Millimeter Wave Patch Antenna	20761A0455 20761A0401 20761A0420	Dr.P.Rakesh Kumar
2	Design and analysis of Circular Petal Flower Shaped Microstrip Patch antenna for WLAN/WIMAX ISM band applications	20761A0428 20761A0404 20761A0447	Dr.K.Rani Rudrama
3	Design and Analysis of Gain-Enhanced Patch Antenna Embedded with Periodic Structure	20761A04C3 20761A0412 20761A0409	Mr.P.James Vijay
4	Design and analysis of Wideband antenna using a new MTM slot for Wi-Fi/WLAN/WIMAX ISM band applications.	20761A04C0 20761A0465 20761A0495	Dr.K.Rani Rudrama
5	Design of wearable patch antenna for wireless for body area network	20761A0479 20761A0493 20761A0485	Mr.M.Siva Sankara Rao
6	Design of a micro strip antenna wide band patch Circular using a combination stub and slit methods For LTE and Wi-Fi Applications	20765A0408 20761A0491 20761A04A9	Mr.Ch.Sivarama Krishna
7	Design of multiband mimo Antenna for 5G applications	20761A04F0 20761A04F3 20761A04I8	Dr.B.Y.V.N.R. Swamy
8	Design of miniaturized branch line coupler with harmonic suppression for wireless communication	20761A04E5 20761A04F5 20761A04I2	Dr.V.Ravi Sekhara Reddy
9	Multi band self grounding antenna for wireless technologies	20761A04H3 20761A04H8 20761A04E9	Mr.Ch.Sivarama Krishna

A.Y:2022-2023			
S. No	**Title of the Project**	**Regd. No**	**Name of the Guide**
1	Design and Implementation of Pre-emphasis driver circuit for a 10 Gbps VLC for indoor applications	19761A04C8 20765A0409 19761A0488	Dr.M.V.Sudhakar
2	Design and analysis of circularly polarized patch antenna	19761A0419 19761A0417	Dr.P. Rakesh Kumar.

		19761A0414	
3	Design of Wideband Patch Antenna for Wireless Applications	19761A0492 19761A04B7 19761A04B1	Dr.P. Rakesh Kumar.
4	Optimizing design of rectangular microstrip antenna	19761A0438 19761A0409 19761A0434	Dr.K. Ravi Kumar.
5	Design of wideband compact branch line balun with harmonic suppressions for wireless communication	19761A0460 19761A0462 19761A0428	V. Ravi Sekhara Reddy.
6	A Metasurface Based Bandwidth Enhancement of Miniaturized Dielectric Resonator Antenna Design For Wireless Communications	19761A0485 19761A04C2 19761A04C4	Dr.B.Y.V.N.R. Swamy.
7	Design And Implementation Of Microstrip Patch Antenna By Using Hfss Software For Bio Medical Applications	19761A04D4 19761A04D6 19761A04G4	Dr.B.Y.V.N.R. Swamy.
8	Design And Characterization Of Wideband Antenna Using Dgs For 5g Applications	19761A04D7 19761A04F2 19761A04I1	Dr.B.Siva Hari Prasad
9	Design and Analysis of Multiband Antenna Using DGS for Wireless Applications	19761A04A0 19761A0481 19761A0467	Dr.B.Siva Hari Prasad
10	Design And Analysis Of UWB Antenna with Band Notch Characteristics by a New MTM Slot	19761A0464 19761A0439 19761A0433	Mrs.K. Rani Rudrama.
A.Y:2021-2022			
S. No	**Title of the Project**	**Regd. No**	**Name of the Guide**
1	A Compact Wide Band Rectangular Patch Antenna For Wireless Applications.	18761A04E9 18761A04C8 18761A04C5 18761A04H2	P. Rakesh Kumar.
2	Compact Frequency Reconfigurable Patch Antenna With Defected Ground Structure For Wireless Communications.	18761A0402 18761A0458 18761A0420 18761A0435	P. Rakesh Kumar.
3	Design Of Compact Microwave Coupler With Harmonic Suppression For Wireless Communications.	18761A0421 18761A04E4 18761A04F8 18761A0416	V. Ravi Sekhara Reddy.
4	Microstrip Fractal Patch Antenna For 5G Applications Using DGS	18761A0407 18761A0430 18761A0424 18761A0443	B.Y.V.N.R. Swamy.
5	Design Of Wideband Antenna Using Defective Ground Structure.	18761A04F6 18761A04D6 18761A04H1	M.V.L. Bhavani
6	Designing Of Conformal Antenna	18761A04E2 18761A04H5 18761A04C0	K. Bhanu.

A.Y:2020-2021			
S. No	**Title of the Project**	**Regd. No**	**Name of the Guide**
1	Design And Analysis Of Reconfigurable Antenna For Wireless Applications	17761A0443 17761A0448 17761A0407 17761A0407	Dr.P. Rakesh Kumar
2	Wearable Antennas For Biomedical Applications	17761A0468 17761A04A3	Smt. K. RaniRudrama

		17761A04A0 17761A0489	
3	Tri-Band Planar Monopole Antenna Using Defected Ground For Wireless Applications	17761A0465 17761A04A4 17761A0463 17761A04B9	Mr.B. Siva HariPrasad
4	Multi-band 6 shaped microstrip patch antenna for 5g applications	17761A04F1 17761A04C3 17761A04H3 18765A0433	Dr.B.Y.V.N.R. Swamy
5	Analysis and design of antenna for wireless applications	17761A04E9 18765A0435 18765A0438 17761A04C6	Dr.P. Rakesh Kumar