Vel Tech
Rangarajan Dr. Sagunthala
R&D Institute of Science and Technology
(Deemed to be University Estd. u/s 3 of UGC Act, 1956)

Department of

Electronics and Communication Engineering

Annual Report 2021-22

Volume - 01

School of Electrical and Communication Engineering

Founders

Vel Tech Group of Institutions

Col.Prof. Vel. Dr. R. Rangarajan

Founder & Chairman

B.E.(Elec.), B.E.(Mech.), M.S.(Auto.), D.Sc

Dr. Mrs. Sagunthala Rangarajan

Foundress & Vice Chairman

M.B.B.S

FOREWORD

Col.Prof.Dr.Vel.R.Rangarajan
B.E. (Elec), B.E. (Mech), M.S. (Auto), D.Sc.,
Founder President

&

Dr. Sagunthala Rangarajan
M.B.B.S.,
Foundress President

Vel Tech
Group of Institutions

This year has been the most challenging since Vel Tech Rangarajan Dr. Sagunthala R & D Institute of Science and Technology was established nearly 24 years ago. Through circumstances largely beyond our control, our University has been forced to change dramatically. I am delighted to see that the department has demonstrated the best qualities in teaching and learning.

It is notable that the department has conducted many events comprising, Faculty Development Program, Webinars and Workshops. I am enormously glad to mention that the department endeavours to achieve Industry-ready student. It gives me great pleasure to see the department has evolved as a unique department blending futuristic needs and developmental skills that are instrumental in facing present day job requirements of students and also for shaping up their personality. It will require all of us, Faculty, staff or student, to continue to strive for excellence in all that we do, and to support one another with, hope and pride in being a part of this exceptional community.

I congratulate the whole department, faculty, staff and students who have strived hard to bring achievement to the department and the institution. This is an outstanding department, which offers the opportunity to redesign the world around and make it even more efficient, connected and sustainable. I believe the department educates the students with this state of art knowledge to transforms the world by designing, building and deploying innovative solutions to real-world problems and provide a scope to deliver real impact for the future of the University in India and beyond. I once again congratulate and look forward for such accomplishment in the future also.

FOREWORD

Mrs. Rangarajan Mahalakshmi Kishore

Chairperson Managing Trustee

Vel Tech

Vel Tech Rangarajan Dr. Sagunthala R & D Institute of Science and Technology has been making a significant contribution to society since more than two decades, through spreading value-based education keeping the present education system in mind. Department of Electronics and Communication empowers their student-youths with appropriate new age technology mind-set, making them digitally ready for the future, ensuring the students to grab an opportunity in this competitive world.

The department also provides High-tech infrastructural lab facilities, the students will be acclimatized to proficient work culture and enable them to emerge as well- acclaimed professionals that the industry desires to have. To support teachers, the Connected Learning Hub was launched, providing curriculum resources across all year levels. Far-sighted how we pulled together over the past one year, I now feel even more confident about the quality of education being delivered to students in ECE department of this esteemed university and this annual report is the witness of the department achievement.

I am delighted to announce this Annual Report of the Department of Electronics and Communication Engineering, which illustrates the department's assurance of faculty for enriching students' learning through teaching-centered methods to advancing excellence in academics and research. I congratulate the department faculty members, staffs and students for the defensible growth to extent new heights every year and I wish that the same enthusiasm may be continued.

-Mrs. Rangarajan Mahalakshmi Kishore

FOREWORD

Prof.Dr.S.Salivahanan
Vice Chancellor
Vel Tech Rangarajan Dr. Sagunthala R&D Institute of Science and Technology

Department of Electronics and Communication Engineering exemplify its excellence in education and research. The department offer an outstanding student experience, delivering world-changing research, and ensuring a global reputation for excellence. I am extremely delighted to see a blend of academic pursuits and extra-curricular activities provided by the department which is much essential for the personality development of the students. Various club activities have been organised in the department to motivate the students for their self-advancement.

I am glad to see students' participation in many competitions at national level addressing to meet the needs of Industry and society. Faculty in various domains, carry out research and publish papers in reputed journals with high impact factor. Patents and research proposals are submitted by faculty members and granted by government funding agencies. I convey my heartiest congratulations to my colleagues for their achievement during the academic year 2021-22 and to all the students for their great feats in different fields ranging from NCC, NSS and Sports too. It is heartening to report that our students have not only participated, but also have won several prizes in various inter-collegiate and national level events.

To conclude, I want to encourage faculty and students to continue to make contributions, big or small. I am also delighted to know that faculty and students are reaping the benefits of online learning modules and e-resources. Again, I humbly appeal to the faculty and students to have optimal utilization of these ICT Initiatives of e-learning to widen their knowledge based. I am thankful to all the members of the teaching fraternity and non-teaching staff for their extreme contribution and entire support to the organisation.

-Prof. Dr. S. Salivahanan

FOREWORD

Prof.Dr.V.Jaya Sankar
Dean, SoEC
Vel Tech Rangarajan Dr. Sagunthala R&D Institute of Science and Technology

The goal of the Department of Electronics and Communication Engineering (ECE), School of Electrical and Communication Engineering (SoEC), Vel Tech Rangarajan Dr. Sagunthala R&D Institute of Science and Technology is to position our Engineering graduates as problem solvers, leaders, life-long learners and honorable citizens of the global community.

We offer the best Engineering atmosphere with world class facilities, intellectual and technological resources from Educational and Research Institutions for the holistic development of our students. The ECE curriculum is balanced between the practical aspects of Engineering and offers three specialization courses (Artificial Intelligence & Data Science, Artificial Intelligences & Machine Learning, and Cybersecurity) with the strong theoretical& practical foundation, this prepares our students to meet the challenges of the global technological society.

I am pleased to introduce this Annual Report 2021 - 22 from the Department of Electronics and Communication Engineering. I am proud to note that the faculty members and students have received awards and recognitions by participating in various events outside the institution at National & International level.

This annual report is a unique compilation of activities conducted by the department and also the accolades and glorious achievements of staff and students. I wish, this report to be used as a reference guide by the ECE-students to plan and realize their academic life more sensible and efficient. I wish you all a very rewarding and successful experience at Vel Tech.

- Prof. Dr. V. Jaya Sankar

FOREWORD

Prof.Dr.P.Esther Rani
Head, Department of ECE
Vel Tech Rangarajan Dr. Sagunthala R&D Institute of Science and Technology

The Department of Electronics and Communication Engineeringwas established in the year 1997 with a sanctioned intake of 60 students. Today the numbers stand as 480 sanctioned intake and the B.Tech. ECE program is accredited by NBA under Tier-I. Over the last two decades, we have grown both in infrastructural and expertise in various fields, related to core ECE. The primary focus of our curriculum is to impart technical know-how to students. Promote their problem-solving skills and to kindle their innovative thoughts through our Outcome-Based Education (OBE) and Active Teaching &Learning Methods (ATLM).

Unique mandates of this department are Automotive Electronics, Network-Cyber Security, Artificial Intelligence, Machine Learning, Communication Antenna, Embedded Systems, Small Satellites, VLSI and Unmanned Air Vehicles (Drone).The department has a strength of 104 diligent faculty members and has well established research labs in collaboration with industries in the fields of Internet of Things, Signal processing, VLSI, Embedded System Design and RF Communication. An exclusive lab is established to impart "Conceive-Design-Implement-Operate" principles among students, thereby to nurture critical thinking, problem-solving and financial-planning skills among students.

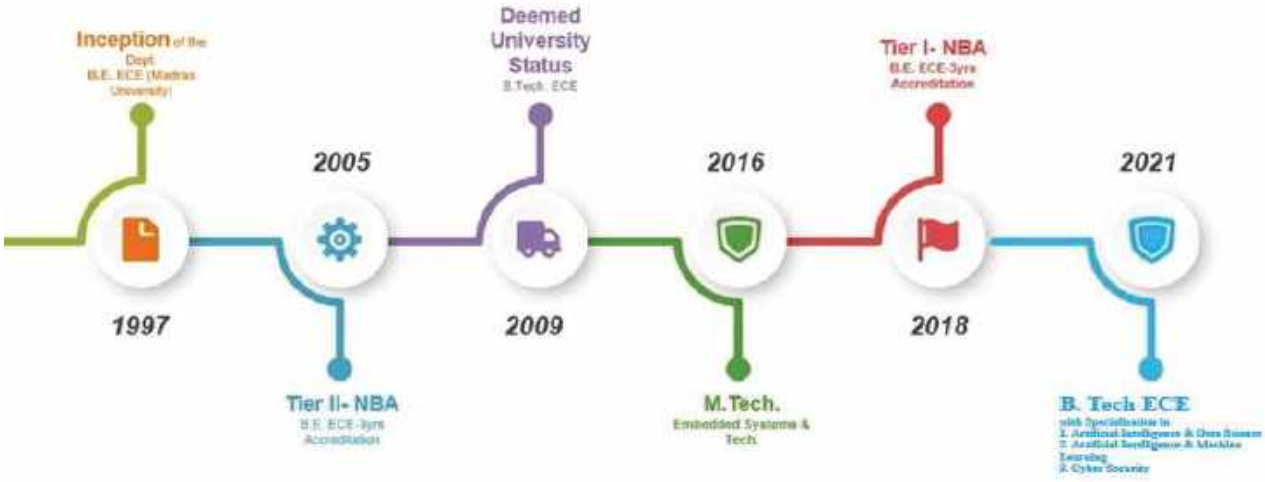
The students are encouraged to undertake various research projects and associate themselves under different clubs like ACE Club, Programming Club, Robotic Club and EWS Club. The department conducts various workshops, expert talks and training programs on recent trends in ECE, in collaboration with industries for the benefit of faculty and students. The department has a good and consistent placement record with students placed in many Core and IT companies. It has active association with professional bodies like IEEE, IET and ISTE for both faculty and students to enhance their research activities.

I am pleased to present this Annual Report for the academic year 2021 – 22. This report covers the summary of all academic and non-academic activities organized by the department. The details of achievements and accolades received by faculty and students from various technical and non-technical events have been composed to bring an exposure to budding engineers about the opportunity available for them. The particulars of student placement and student internship at various industries and international universities are also enclosed to motivate the ECE students. I hope that, the information provided through this annual report will help them to plan and realize their academic life more progressive.

-Prof. Dr. P. Esther Rani

Table of Contents

Department at a Glance



04 Academic Research Laboratories

01 CDIO Department Exclusive Laboratory

104 Teaching Faculty

06 Industry Supported Laboratories

480 Approved UG Intake

ACE

ROBOTICS CLUB ECE

Programming Club

ENGINEERS WITHOUT BORDERS India

Department at a Glance

The Department of Electronics and Communication Engineering was established in 1997 since the inception of the institution. Over the time, the department has emerged in diverse dimensions and affords a spellbound ambience for teaching and learning. The department offers B.Tech. in Electronics and Communication Engineering, M.Tech. in Embedded Systems and Technologies and Ph.D. in ECE degree programmes with technology-oriented courses that creates industry ready personnel in the prudent fields of ECE.

All the programmes are approved by AICTE and the B.Tech. ECE program has received Tier I NBA accreditation for 3 years in the year 2018, which is extended for 1 more year in 2021. The department has been strengthened by its erudite faculty members from reputed Universities and organizations.

The key areas of research and academic activities in the department are VLSI Design, RF and Microwave Antenna Design, Signal Processing, Image and Video Processing, Embedded Systems Design, Wireless Sensor Networks, Unmanned Aerial Vehicles and Small Satellites. The faculty and students have won awards like CANEUS Lockheed Martin Award in IISC for Small Satellites, Aegis Graham Bell Award for Unmanned Air Vehicles and for various innovative achievements.

The department is well-equipped with curriculum-based laboratories like Texas Instruments powered IoT & Signal processing labs, Xilinx powered System on Chip lab, eYantra Embedded systems and Robotics lab supported by MHRD and IIT Bombay and FranceCol lab in collaboration with FranceCol technology, France.

Several initiatives in alliance with International Universities and Core Electronics Industries are also given cardinal importance in the department. The department is actively associated with organizations such as C-DAC (Pune), ARAI (Pune), NASSCOM and Kwality Photonics.

14 Professors

20 Associate Professors

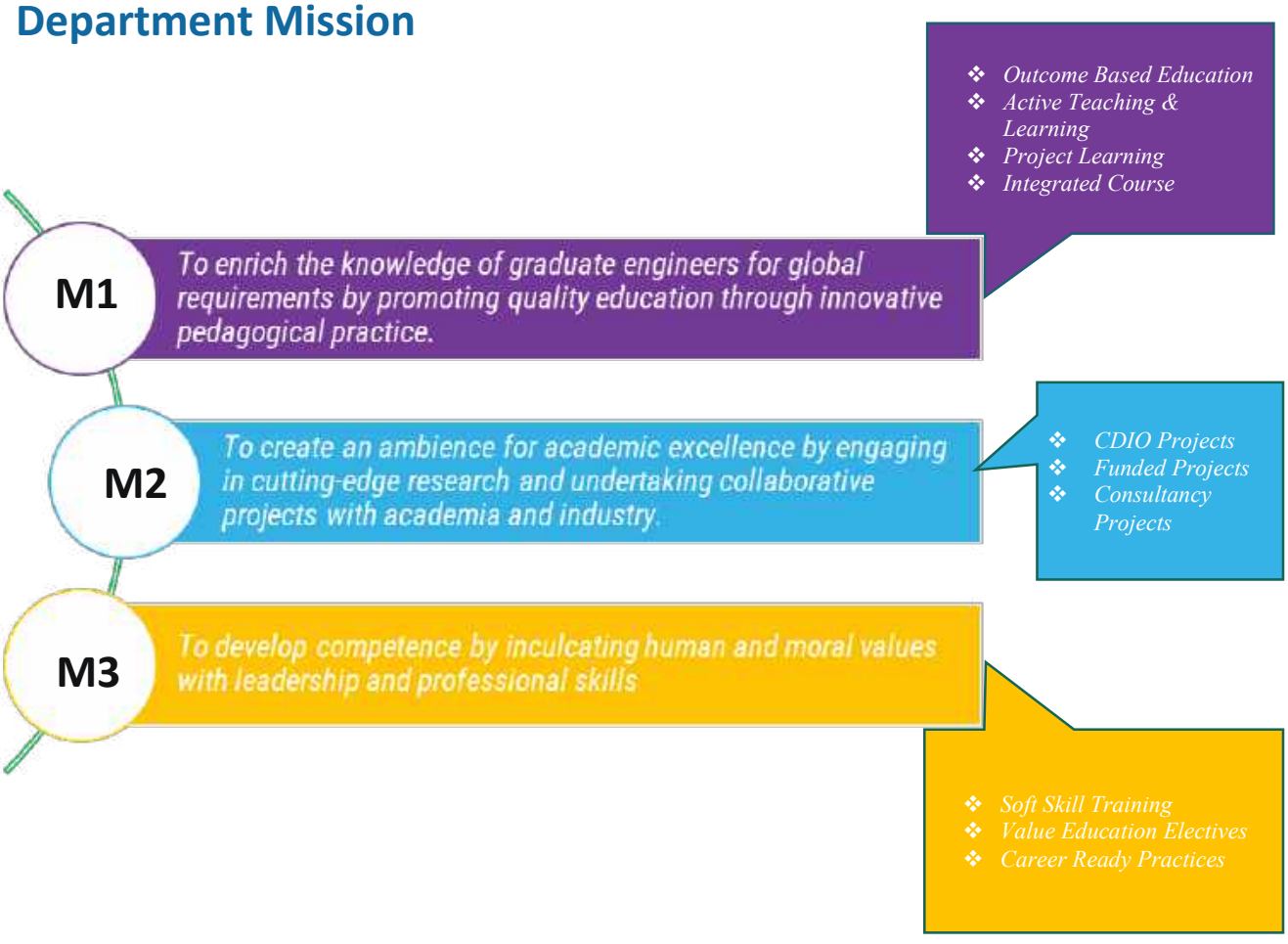
70 AssistantProfessors

Department Vision & Mission

Department Vision

"To be a Centre of Academic Excellence through quality education and cutting-edge research in diversified fields of Electronics and Communication Engineering to meet the global challenges and produce high quality professionals."

Department Mission



Department Program Educational Objectives

Our graduates will solve contemporary problems in the analysis and design of Electronics and Communication Devices and Systems

Our graduates will conceive ideas for the societal issues and will design, implement and operate the Engineering products for the ideas conceived.

Our graduates will perform in various roles with adequate Technical and Managerial Skills in Design, Development, Production and Support areas of Electronics and Communication and Allied Industries.

Our graduates will pursue higher education and will be lifelong learners in their profession, effectively communicate the technical information and work in multidisciplinary teams.

Our graduates will be ethical, environmental, health and safety concerned in their profession.

About the Program (B.Tech. ECE)

- *The program follows **Outcome Based Education (OBE),** which primarily focuses on knowledge, skill and attitude of the graduates.*

- *From the academic year 2015-16 onwards, the academic regulation of the program follows **Choice Based Credit System (CBCS)** with academic flexibilities like (i) Course Choice within the program (ii) Faculty Choice (iii) Department /School level course choice (iv) MOOC course choice.*

- *The program curriculum**(VTU R15)** consists of various **course categories (Foundation, Program Core, Program Elective, Allied Elective, University Elective, Value Education Elective, Independent Learning, Industry/Higher Learning Institute Interaction and Complementary Skill Courses)** to provide the depth and breadth required for the program and for the attainment of student outcomes of the program.*

- *Program **electives on contemporary technologies** such as **Software Defined Networking, Software Defined Radio, Next Generation Mobile Networks, Nano Photonics, Radio over Fiber Systems, System on Chip, Internet of Things** were included in the curriculum based on the recommendations from Board of Studies (BOS) and further approved by the Academic Council Members.*

- ***Faculty and Industry-Experts from top QS ranking institutes in USA, Germany and Taiwan** and reputed organizations delivered one credit courses on contemporary technologies for the students of B.Tech. ECE program.*

- *In the program, faculty members have been facilitating students towards **collaborative and cooperative learning** through **Jig-Saw, Think-Pair-Share, Peer Instruction, Mud Card** and **Flipped Classroom** and **Problem / Project Based Methods**.*

- *Since 2018, the program facilitates interested **final year students** who have completed all courses except project works to undergo **nine months internships/project work** in **industries or International Universities**.*

- *Students to be admitted for the **academic year 2021 - 22** will follow the new curriculum **"VTRUGE21".**In addition to the various course categories offered in previous regulation; the new curriculum has the option of obtaining **B.Tech. Degree in ECE with specialization** in*
  - ***Artificial Intelligence and Data Science***
  - ***Artificial Intelligence and Machine Learning***
  - ***Cybersecurity***

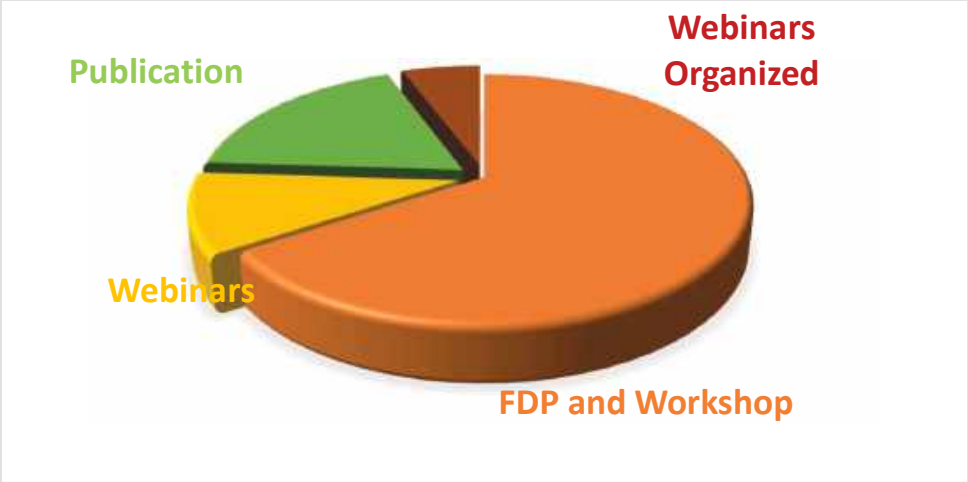
- *The **VTRUGE21** also facilitates the students to earn a **B.Tech. Honors** in*
  - ***VLSI System Design***
  - ***Artificial Intelligence for Wireless Communication***

- *The department also offers **Minor specialization** in*
  - ***Smart Communication Technologies***
  - ***Smart Automation** for the students of **other B.Tech. Programmes***

- *This provides an opportunity for the students to be expertise in the state of the Art Technologies enabling them to be industry fit in the current competitive environment.*

- *The department labs are well-equipped under Industry specification and Research factors in areas of Electronics and Communication. Additional special features of the labs are that they function in association with Industry and Research organizations such as centre for development of advanced computing C-DAC, Pune, Automotive Research Association of India (ARAI, Pune), NASSCOM, Kwality Photonics etc.*

Faculty Competency (2021 - 22)



No of Faculty
PhD - **49**
PDF - **2**

No of Faculty pursuing Ph.D.
47

No of Professors
14

No of Associate Professors
20

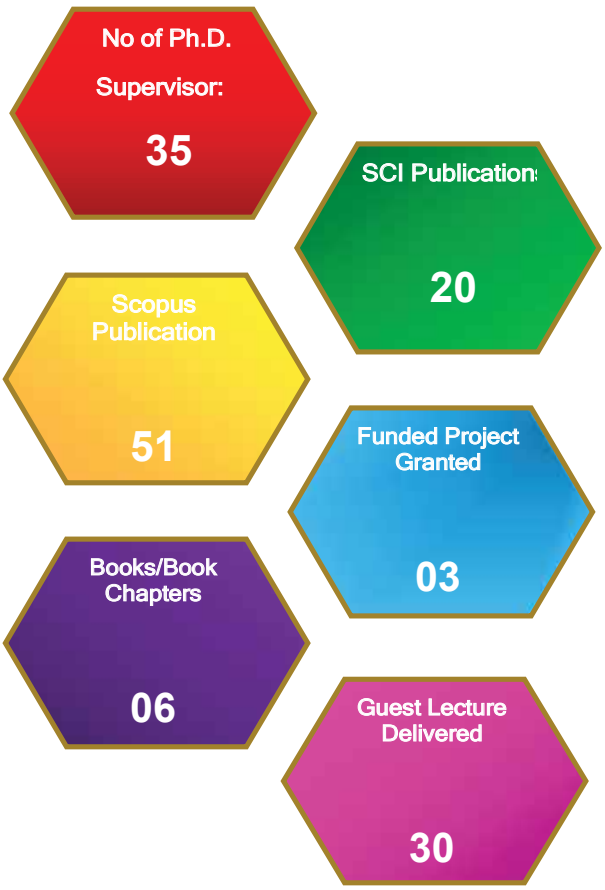
No of Assistant Professors
70

	Communication Domain	Signal Processing Domain	Embedded Systems	VLSI Design	Networking Domain
FDP & Workshops Attended	24	58	59	24	72
FDP & Workshops Organized	03	03	01	03	06
Webinars Attended	04	06	07	02	15
Webinars Organized	01	04	Nil	Nil	Nil
Research Proposals Submitted	03	02	02	04	01
Research Proposals Granted	01	02	Nil	Nil	Nil
Patents Published / Granted	03	01	02	01	02
Student Mentoring (External Contest)	Nil	03	06	Nil	01

Faculty Achievements (2021 - 22)

As per the program criteria specified by **the Lead Society: Institute of Electrical and Electronics Engineers,** the program curriculum is designed to cover the breadth and depth across the following domain areas. The faculty members in the department have competencies in all the domains specified.

Communication Domain	•Faculty •Faculty with Ph.D. •Publication •Books/Book Chapter	- 24 - 17 - 22 - 02
Signal Processing Domain	•Faculty •Faculty with Ph.D. •Publication •Books/Book Chapter	- 26 - 13 - 21 - 01
Embedded Systems Domain	•Faculty •Faculty with Ph.D. •Publication •Books/Book Chapter	- 19 - 05 - 17 - 01
Networking Domain	•Faculty •Faculty with Ph.D. •Publication •Books/Book Chapter	- 16 - 05 - 04 - 02
VLSI Domain	•Faculty •Faculty with Ph.D. •Publication	- 19 - 09 - 11



1. **Dr. A. Selwin Mich Priyadharson** received research grant from Central Power Research Institute (CPRI) for his research entitled "Design of Cascaded Adaptive Control with O_2 and Temperature data of Combustion Images for Optimization of Boiler Combustion Processes in a Thermal Power Plant" for the year of 2022-2024. Research Grant Amount Rs. 29, 88,000.

2. **Dr. Neelamegam D** received research grant from the Department of Biotechnology (DBT) for his research entitled "Development of sensing system for rapid and in-situ quality assessment of black rice, ginger (Zingiberofficinale) Elsholtzia griffithii and Cinnamomum zeylanicum of north east india using spectroscopic (NIR and Raman) technologies" for the year of 2022-2024. Research Grant Amount Rs. 29, 98,560.

3. **Mr.R.Prasanna** received research grant from Naval Science & Technological Laboratory (NAL) and his research entitled "Development of 3D printed flexible patch antennas for enhancement of communication range in UAV" for the year of 2021-2023. Research Grant Amount Rs. 28, 02,600.

International Journal Publications 2021 – 22

1. Rajesh, A., Esther Rani, P, " Mitigation of stretch type vampire attack using probabilistic variable fuzzy rough set in wireless sensor networks", Concurrency and Computation: Practice and Experience, 2021, 34(4), e6665
2. B.V.V.S.R.K.K. Pavan, Dr.P. Esther Rani, " EEG Signal De-Noising Based On The FEJER KOROVKIN Wavelet Filter", Journal of Theoretical and Applied Information Technology 15th September 2021. Vol.99. No 17.
3. V.Vinoth Kumar ,G.Sasikala,"Internet of Things (IoT) Enabled Air Quality Monitoring System for Conventional and UAV Application", Nature Environment and Pollution TechnologyVolume 21, Issue 1, Pages 71 - 811 March 2022
4. Mallikharjuna Rao Sathuluri,G.Sasikala,"Comprehensive Analysis and Design of Capacitive RF MEMS Switches for Reconfigurable Microstrip Patch Antenna", wireless personal communication ,Volume 123, Issue 1, Pages 709 - 725March 2022
5. Mallikharjuna Rao Sathuluri,G.Sasikala ," Structural And Material Based Comprehensive Performance Analysis On Shunt Capacitive Rf Mems Switch",Journal of Engineering Science
6. J.Mohana,Yakkala bhaskarrao,Vimalnath,Benson Mansingh, Yuvaraj.N, K.Srihari, G.Sasikala, V.Mahalakshmi,"Application of Internet of Things on the Healthcare Field Using Convolutional Neural Network Processing", journal of healthcare engineering ,Volume 20222022 Article number 1892123
7. G. Sasikala, V. Mahalakshmi, K. Srihari,Raja Loganathan, R. Jaikumar,ArunSekar Rajasekaran,V. K. Shanmuganathan, K. Santhosh, Sama Sumanth, Venkatesa Prabhu Sundramurthy," Semiconductor Polymer Carbon Composite Coated Fabric for Warm Beds in Hospital", Adsorption Science and TechnologyVolume 20222022 Article number 2115406
8. G. Vinoda Reddy, Kavitha Thandapani, N., C. Senthilkumar, S. V. Hemanth S. Manthandi Periannasamy and D. Hemanand, "Optimizing QoS-Based Clustering Using a Multi-Hop with Single Cluster Communication for Efficient Packet Routing", International Journal of Electrical and Electronics Research (IJEER), Volume 10, Issue 2, Pages 69-73, 2022
9. Kavitha Thandapani, Ganesamoorthy Raju, Maniganda Pujali, "Performance improvement on spectral efficiency and peak to average power reduction for 5G system", Indonesian Journal of Electrical Engineering and Computer Science (Q3 IF:0.26) Vol. 26, No. 2, pp. 888-894, May 2022
10. Vignesh Prasanna Natarajan, Kavitha Thandapani "Adaptive Time Difference of Time Arrival in Wireless Sensor Network Routing for Enhancing Quality Service" Instrumentation Mesure Mėtrologie, Vol 20, No.6, pp.301-307 December,2021
11. Vignesh Prasanna Natarajan, Kavitha Thandapani "An improvement of communication stability on underwater sensor network using balanced energy efficient joining distance matrix" International Journal of System Assurance Engineering and Management, Vol.13, pp.690-698, Jan 2022
12. Shiyamala S.;Bhuvaneshwaran G.;Reddy, Chejerla Om Prakash,"Autonomous object recognition and collision avoidance for micro aerial vehicles with effective and cost-efficient sensor. AIP Conference proceedings, 2022
13. Lingaiah Jada, Shiyamala S. ," Investigation On GFDM System For 5G Applications Over Fading Channels".Journal of Engineering Science and Technology Review, Vol.13, Issue 3, 2022

14. Nitesh Gaikwad , S.Shiyamala, "Design and Development of Microarchitecture for Dynamic IoT Communication",International Journal of Engineering Trends and Technology Volume: 69,Issue :11, PP 1-8,2021
15. Kanithan, S., Vignesh, N.A., Jana, S., C. Gokul Prasad, E. Konguvel, S. Vimalnath, "Negative Capacitance Ferroelectric FET Based on Short Channel Effect for Low Power Applications. Silicon. 2022, https://doi.org/10.1007/s12633-021-01625-z
16. Jana, S., Thangam, S., Kishore, A., Kumar, V.S., Vandana, S., "Transfer learning based deep convolutional neural network model for pavement crack detection from images", International Journal of Nonlinear Analysis and Applications, vol.13, no. (1), pp. 1209–1223, 2022
17. Ch, G., Jana, S., Majji, S., Kuncha, P., E., F.I.R. and Tigadi, A., "Diagnosis of COVID-19 using 3D CT scans and vaccination for COVID-19", World Journal of Engineering, vol. 19, no. (2), pp. 189–194, 2022, https://doi.org/10.1108/WJE-03-2021-0161
18. Dr. C.R. Bharathi, .V. Ramesh, . Vamsi Priya, "Proposed Access Control And Security Architecture Based On Fog Computing For Iot Environments", International Journal of Early Childhood Special Education (Int-Jecse), Vol 14, Issue 02, PP:1398-1404, Doi:10.9756/Int-Jecse/V14i2.123 ISSN: 1308-5581, 2022
19. Harikrishna Paik, Shailendra Kumar Mishra, Ch Mohan Sai Kumar and K Premchand, "High performance CPW Fed printed Antenna with Double Layered FSS Reflector for Gain and Bandwidth Improvement " PIER letters, Vol. 102, 47-55, Jan 2022
20. K Premchand, Harikrishna Paik, Shailendra Kumar Mishra, , "Stripline Fed Slotted Edge Balanced Antipodal Vivaldi Antenna for Advanced Radar Applications " PIER letters, Vol. 103, 119-126, Mar 2022
21. Harikrishna Paik, Lanke Charan Teja, Mallidi Akash Reddy, and Kovvuri Sai Trinadh Reddy, "A Miniaturized Fractal Antenna with Square Ring Slots for Ultrawideband Applications " PIER letters, Vol. 99, 169-177, 2021
22. Harikrishna Paik and K Premchand, "Dual Polarized Circular Ring Monopole Antenna with High Isolation and Enhanced Bandwidth" International journal of Microwave and Optical Technology, vol. 16, no. 4, pp. 380-387, 2021
23. Harikrishna Paik and Hiran Kumar Singh, "A Double Tuning Fork Shape Printed Antenna with Enhanced Gain and Efficiency for X-band Satellite Applications," International journal of Microwave and Optical Technology, vol. 16, no. 2, pp. 134-141, 2021
24. M.Lordwin cecil prabhaker and Suresh P "AI based Realtime Task Schedulers for Multicore Processor based low power biomedical devices for Health Care Application"" Multimedia Tools and Applications, July 2022, https://doi.org/10.1007/s11042-021-11651-z.
25. Shaher Dwik, Lordwin Cecil Prabhaker M, "Survey on Energy Harvesting CMOS Sensor Based Digital Camera". Opt. Mem. Neural Networks 31, 97–106, March 2022.
26. M.Lordwin cecil prabhaker, M.Reevathi and P.Ramu, "A Hybrid Three Wheeler E-Gear Using 3-Stage Inverter", Int. J. Vehicle Autonomous Systems, Vol. 15, Nos. 3/4, pp.241–255 July 2021.
27. D.Selvathi, N.Herald Anantha Rufus, Henry Selvaraj"Brain Tumor Detection and Brain Stroke Diagnosis System Using CANFIS Classifier" Springer Proceedings in Mathematics and Statistics, 364, pp. 355–367, 2021
28. D.Selvathi, N.Herald Anantha Rufus, Henry Selvaraj "Brain Tumor Detection and Brain Stroke Diagnosis System Using CANFIS Classifier" Lecture Notes in Networks and Systems, 2022, 364 LNNS,, 364, pp. 355–367, 2022

29. J. Annrose, N. Herald Anantha Rufus, C. R. Edwin Selva Rex & D. Godwin Immanuel "A Cloud-Based Platform for Soybean Plant Disease Classification Using Archimedes Optimization Based Hybrid Deep Learning Model" Wireless Personal Communications, 122(4), pp. 2995–3017, 2022.
30. Britto Pari J, Karuthapandian Mariammal , Vaithiyanathan Dhandapani " "A Reconfigurable High-Speed and Low Complexity Residue Number System based Multiply-Accumulate Channel Filter for Software Radio Receivers" World Journal of Engineering, ISSN: 1708-5284 ,Aug 2022 .
31. N. Vinodhkumar, G. Durga , S. Muthumanickam, "Numerical study on SEU performance of strain engineered 6T-SRAM cells," Journal of Circuits, Systems and Computers, vol. 31, no. 02, pp. 2250034 (1-9), 2022. .
32. Satish Addanki,Kamalaksha Baral ,N. Vinodh Kumar, "Simple optical sensors for oxygen detection:simulation fabrication and characterization," Journal of modern Optics vol. 68, no. 16, pp. 886-894,2021.
33. J. Mohanraj, M. Valliammai, S. Sridevi, T. Kanimozhi, N. Vinodhkumar and S. Sivabalan, "All Fiber-Optic Multigas (NH_3, NO_2, and CO) Sensor Based on $MoWS_2$ Coated Fiber," IEEE Sensors Journal, vol. 22, no. 13, pp. 12869-12876, 1 July1, 2022, doi: 10.1109/JSEN.2022.3176862 .
34. J. Mohanraj, M. Valliammai, S. Sridevi, T. Kanimozhi, N. Vinodhkumar and S. Sivabalan, "All Fiber-Optic Multigas (NH_3, NO_2, and CO) Sensor Based on $MoWS_2$ Coated Fiber," IEEE Sensors Journal, vol. 22, no. 13, pp. 12869-12876, 1 July1, 2022, doi: 10.1109/JSEN.2022.3176862 .
35. S. Sridevi, T. Kanimozhi, N. Ayyanar, S. Chugh, M. Valliammai and J. Mohanraj, "Deep Learning Based Data Augmentation and Behavior Prediction of Photonic Crystal Fiber Temperature Sensor," in IEEE Sensors Journal, vol. 22, no. 7, pp. 6832-6839, 1 April1, 2022, doi: 10.1109/JSEN.2022.3150240.
36. Nirmala, S., Balasubramaniam, D., Arunajayashree, R., Atla, R., Enabling public transport system for visually impaired people, AIP Conference Proceedings, Volume 2405, 2022.
37. S. Oudaya coumar, "Miniaturized DGS Based Multi-Band Pass Filters for Satellite Applications", Journal of Ambient Intelligence and Humanized Computing, vol.13, no.1, pp.241-249, 2022.
38. S. Oudaya coumar, "Ultra-Miniaturized DGS Based Meander Line Multi-Band Filters With/Without Resonators for Satellite Band Applications", Journal of The Institution of Engineers (India): Series B, vol. 103, no.1, pp. 213-223, 2022.
39. S. Oudaya coumar, "Conductor Backed Co-Planar Waveguide Inspired S-Band Filter Using Multi-Ring Resonators", Progress In Electromagnetics Research Letters (PIER Letters), vol. 96, pp. 59-64, 2021.
40. Bakiya, A., Anitha, A., Sridevi, T., & Kamalanand, K. (2022) "Classification of Myopathy and Amyotrophic Lateral Sclerosis Electromyograms Using Bat Algorithm and Deep Neural Networks" Behavioural Neurology, April, 2022.
41. Neelamsetti Kirn Kumar, Rahul S G, Ramya Kuppusamy, Srete Nikolovski, Yuvaraja Teekaraman, Indragandhi Vairavasundaram, Siripireddy Venkateswarulu, "Fuzzy Logic-Based Load Frequency Control in an Island Hybrid Power System Model Using Artificial Bee Colony Optimization", Energies, Vol. 15, no. 6, pp.1-20, March 2022.
42. Annie Grace Vimala, G.S., Prakash, V.R., Akilandeswari, A., Sungeetha, D., M. Saravanan, "Design and Development of Substrate Integrated Waveguide Based Filtenna for X Band Application", Applied Computational Electromagnetics Society Journal, 2022, 37(3), pp. 305–310. 10.13052/2022.ACES.J.370307.
43. T.Aathmanesan, "Gain improvement of THz antenna using semicircular slot and modified ground plane," International Journal of Communication Systems, vol.35, no.e5103, Jan. 2022.

44. Nandhakumar, E., Selvakumar, P., Sasikumar, A., Vivek, E., & Kamatchi, R, "Facile eco-friendly synthesis of rare-earth cobaltite-based perovskite nanostructures as electrocatalysts for oxygen evolution reaction", Materials Letters, 2022, 315, 132002.
45. Kousalya Layudi, GVS Harika, T. Anand, G.Gulothungan, P.Srinivas, G. Narasimha, K.Venkata Subbaiah, P.Josthna " Green synthesis of Tecoma stans flower and leaf extracts: characterisation and anti-proliferative," Fuel, vol.317, no.123494, June. 2022.
46. S.Thanigaivel, G.Gulothungan, S.Vickram & N.Karmegan, " The urge of algal biomass based fuels for environmental sustainbility against a steady tide of biofuel conflict analysis: Is third-generation algal biorefinery a boon?," Fuel, vol.317, no.123494, June. 2022.
47. Rengasamy, R., Sellapillai, S., Dhanasekaran, D. (2022). An Inverted L-Shaped ACS-fed Antenna with SRR for Bandwidth Enhancement Application. Lecture Notes in Electrical Engineering, vol 792,957-964, 2022.
48. Prabhu Kumar Surarapu, Gandhi Mallela, N. Ramu," Life cycle assessment of samarium ferrite materials for electronic devices" Materials Today: Proceedings ,Volume 52,Part 3,2022,Pages1589-1593.
49. Ambika Bhuvaneswari, C., E. D. Kanmani Ruby, A. Manjunathan, R. Balamurugan, P. Jenopaul, and Belachew Zegale Tizazu. "Effects of Novel Material Field Effect Transistor for Heterogeneous Energy and Traffic-Aware Secure Applications." Advances in Materials Science and Engineering 2021 (2021).
50. L. Raja, A. Farithkhan, K. Vijayalakshmi, T. Sripriya, R. Krishnan and K. N. Devnesh, "Design of Cubic Dielectric Resonator Antenna for Biomedical Application," 2021 International Conference on Innovative Computing, Intelligent Communication and Smart Electrical Systems (ICSES), 2021, pp. 1-4, doi:10.1109/ICSES52305.2021.9633792.
51. R Ramasamy, R Rajkumar, Sathyamoorthy Sellapillai, M Vasim Babu, CNS Vinoth Kumar" A Compact UWB MIMO Antenna for IoT Applications" 3rd IEEE International Virtual Conference on Innovations in Power and Advanced Computing Technologies, i-PACT 2021.
52. Vasim Babu, M., Vinoth Kumar, C.N.S., Baranidharan, B., Madhusudhan Reddy, M., Ramasamy, "R. Energy-Efficient ACO-DA Routing Protocol Based on IoEABC-PSO Clustering in WSN" ,Lecture Notes on Data Engineering and Communications Technologies, 2022, 114, pp. 139–155.
53. K. Sakthisudhan, M. Brenda, Franklin Telfer, L. Mohanasundari, K.P. Senthil Kumar,Wideband antenna array pattern based on reinforcement epoxy materials & breast cancer diagnostic by composites,Materials Today: Proceedings,Volume 45, Pages 2844-2848, 2021.
54. C. M. S. Kumar, R. S. Valamathi, and S. Aswath, "Multiscale image segmentation using cascade MultiResUNet proposal masking convolutional network," 2021, doi: 10.1109/INCET51464.2021.9456423.
55. C. H. M. S. Kumar, R. S. V. Alarmathi, and S. Aswath, "An Empirical Review on Image Dehazing Techniques for Change Detection of Land Cover," 2021, doi: 10.1109/ASIANCON51346.2021.9544917.
56. S. Aswath, R. S. Valarmathi, C. H. Mohan Sai Kumar, and M. Pandiyarajan, Highly Secured Steganography Method for Image Communication using Random Byte Hiding and Confused & Diffused Encryption, vol. 75. 2022.
57. S. Aswath, C. M. S. Kumar, K. Reethi, B. Deepthi, K. Chikitha, and S. Rupesh, "Enhancing the Performance of Classifiers in Detecting Abnormalities in Medical Data using Nature Inspired Optimization Techniques," 2022, doi: 10.1109/ICONAT53423.2022.9726096
58. S. Aswath, N. Bharanidharan, R. S. Valarmathi, and H. Rajaguru, "Modified Spotted Hyena Optimizer Based Leukemia Microscopic Images Classification," in IFMBE Proceedings, 2022, vol. 86, doi: 10.1007/978-3-030-90724-2_13.

59. S. Aswath, C. H. M. S. Kumar, V. Hima Deepthi, S. Imran Javeed, and S. V. N. Rupesh, "DNA Sequence Classification with Improved Performance of Supervised Classifiers using Nature Inspired Algorithms," 2022, doi: 10.1109/CONIT55038.2022.9848025.
60. Archana P, Divyabharathi P, Camry Joshya Y, Sudha, " Artificial Neural Network Model For Predicting Fraudulent Attacks",Journal of Physics: Conference Series,Vol 1979,pp1-8, Aug, 2021.
61. Camy Joshya Y, Divyabharathi P, Archana P, Vikram N, " Automated Detection Of Lung Cancer Based On Neuro Fuzzy Technique", Journal of Physics: Conference Series, Vol 1979, Issue 1,pp 1-5, Aug, 2021.
62. M. Manimaraboopathy,G. A. Sathish Kumar "Realization of all-optical JK fipfop in mid-IR wavelengths using triple-core photonic quasi-crystal fber"Optical and Quantum Electronics, 54:146 Feb-2022
63. Mariya Celin, T. A., Vijayalakshmi, P., & Nagarajan, T, " Data Augmentation Techniques for Transfer Learning-Based Continuous Dysarthric Speech Recognition". Circuits, Systems, and Signal Processing, pp. 1-22, 2022.
64. Vivekanand Krishnaji Joshi & Dr. Kavitha. Role of Radio Enviroment and Coder in Low Bandwidth Radio Speech-1. Journal of Optoelectronics Laser, Vol. 4, No.6, pp. 694–702, 2022.
65. Dr.Senthil Kumar , Dr.Kavitha Thandapani , Asritha Manju Immadisetty , Ruchitha Chilukuri, "Structural Health Monitoring of Power Line using Bragg Sensor", Webology, Vol.16, No.6, pp:33-43,2021
66. Dr. V. Rajmohan, Dr. T.Kavitha, Mr.V.Beslin Geo, Dr. V. R.Prakash, "An Analysis and Efficient Approach to Protect CR Networks", Turkish Online Journal of Qualitative Inquiry (TOJQI), Volume 12, Issue 3, pp:2334-2346, June 2021.
67. S. Jana, A Rijuvana begum, S Selvaganesan, P. Suresh, "'Deep belief network based disease detection in pepper leaf for farming sector", Turkish Journal of Physiotherapy and Rehabilitation. Vol 32, no. 2, pp. 994-1002, Dec 2021.
68. M.Anandan, Chennupathi Lokesh ,Hemant reddy Nandipatti, Valluri Lakshmi Prasanna ," Optimal Cooperative data transmission over SC-FDMA Channel estimation on LTE-A based Networks" International journal of creative research thoughts (IJCRT), ISSN : 2320-2882,Vol10, Issue 5, May 2022,pp.a639-a644.
69. D. Balasubramaniam, R. Vadivelu, G. Santhakumar, P.Parthasarathy, R. Anjalai, Physical Layer Channel Modeling of 5G New Radio, Turkish Online Journal of Qualitative Inquiry (TOJQI) Volume 12, Issue 7, July 2021.
70. Pandiyarajan, Dr.S.vasuki, Dr. D. Raj Balaji, Dr B Chandrashekar, Durgachandramouli Yenugu, Dr. Sushma Jaiswal,"Improved Extreme Learning Machine (IELM) based Hunger Games Search for Automatic IP configuration and duplicate node detection",Design Engineering (Toronto),Vol 9,pp. 3764-3779,2021.

International Conference Publications 2021 – 22

1. Sanmugasundaram Ravichandran, Natarajan Somasundaram, Rajkumar Rengasamy, "A Compact Complementary Split Ring Resonator-based Notch Design for Wireless Access ror Vehicular Environment/Wlan/Itu Band Application", Futuristic Communication and Network Technologies, Vol. 792, pp. 403-411, 2021
2. Shiyamala.S , Meena A , "Low power enhanced trivium implementation using parallel-pipeline technique" International Conference on Recent Advances in Computation, Communication, Internet of Things and Artificial Intelligence (ICRACIA2021) on .
3. S. Shiyamala , G. Bhuvaneshwaran ,Chejerla Om Prakash Reddy, "Autonomous Object Recognition and Collision Avoidance for Micro Aerial Vehicles with Effective and Cost-Efficient Sensor", International Conference on Recent Advances in Computation, Communication, Internet of Things and Artificial Intelligence (ICRACIA2021)
4. S. Shiyamala , I.Asritha Manju, CH.Ruchitha,"FPGA Implementation of High Accuracy, Low Latency Breast Cancer Diagnosis Using YOLO Algorithm," National Conference on Communication and Signal Processing Systems. (Received Best Paper Award)
5. Sai Suneel A and Shiyamala S. "A novel artificial; intelligence architecture for sensing the primary user in the spectrum", International Conference on advanced computing and informatics.
6. Jana, S., Thangam, S., Selvaganesan, S., "Gender Identification Using Ensemble Linear Discriminant Analysis Algorithm Based on Facial Features", Smart Innovation, Systems and Technologies, 269, pp. 23–35, 2022.
7. S Jana, S Thangam, Saddapalli Vandana, Venkata Sai Kumar, Annem Kishore, "Deep Learning Based Identification of Plant from Leaves" , in First Virtual International Conference on Advances in Signal Processing Communications and Computational Intelligence, Dept. of ECE, CMR Technical Campus, Hyderabad.
8. S Jana, T Srinivasa Usha Sri, V Niharika, G Balaji, "A Transfer Learning Approach for Sorting and Grading of Fruits", AICTE sponsored National Conference on Communication and Signal Processing Systems, RMK College of Engineering.
9. Jana S, Bharanidharan N , Shanmukha Nagasai P, Saravan Kumar K, Mani Nageshwar V, "Diabetes Prediction Using Machine Learning Algorithms," 2022 8th International Conference on Advanced Computing and Communication Systems (ICACCS),, pp. 46-51, 2022, doi: 10.1109/ICACCS54159.2022.9785073.
10. T.Kavitha, P.Nagarajan, R.Ganesamoorthy, A.Arulmary, S.Jana, "Investigating Wireless Optical Communication Systems for inter satellite communication using QPSK Modulation Technique", 2nd International Conference on Data Intelligence and Cognitive Informatics, SCAD College of Engineering and Technology, July 2021.
11. Aanandha Saravanan K ,Aloy Anuja Mary G,Sathyasri B,Farithkhan A, "" Energy Optimized Quorum System MAC Protocol for Wireless Sensor Networks"", International Conference on Engineering Facilities Maintenance And Management Technologies , 2021.
12. K.Aanandha Saravanan, Dr.G.Aloy Anuja Mary , Dr.Sathyasri, Mr.A.Farithkan, "" Energy efficient Cluster based Endorsement for heterogeneous Wireless Sensor Network"", International Conference on Recent Innovations in Science, Engineering & Technology, 2021.

13. Imran Javeed Settu, Aloy Anuja Mary G, Anto Bennet M ," Hybrid Spectrum Sensing Based on Adaptive Threshold Joint Correlation and Energy Detection For Cognitive Radio Network ",International Conference on Engineering Facilities Maintenance And Management Technologies, 2021.
14. S.Vishnu Kumar, G.Aloy Anuja Mary, S.Arunmozhi Selvi, Glorindal ,"Design of field to fork framework :Integrating IoT into traditional farming", International Conference On Smart Technologies and Systems for Next Generation Computing,2022.
15. Malathi.M, Sinthia. P, AloyAnujaMary, G, M. Nalini, Fareen Farzana Wahed ," Segmentation of breast cancer using fuzzy C means and classification by SVM based on LBP features ", AIP Conference Proceedings ,2022.
16. Fareen Farzana Wahed, Anitha Juliette.A, Sinthia, AloyAnujaMary.G ," Detection of Sickle Cell Anemia Using SVM Classifier ", AIP Conference Proceedings,2022.
17. Aloy Anuja Mary ,Gnanaraj,Farithkhan,Abbas Ali,Arun C A,Vishnu Kumar Siva Kumar," Hierarchical IoT Network Management and Cloud Computing to Make Healthcare Green",Engineering Facilities Maintenance And Management Technologies,2021.
18. K. Murali,K.Prasuna,G.Aloy Anuja Mary ,"Novel technique for identification of false coconuts to avoid genetic disease using classifiers',Intelligent computing and communication,2021.
19. Dr.G.Aloy Anuja Mary , T.Athmanesan," Design and Development of Novel Micro Patch Antenna for 5G Mobile Applications",Recent Innovations in Science, Engineering & Technology,2021.
20. Farithkhan A, Dr.G.Aloy Anuja Mary,"DESIGN OF DECENTRALIZED CONTROL FOR SWARM OF UAVS",Communication and Signal Processing systems,2021.
21. Farithkhan A, Dr.G.Aloy Anuja Mary, T. Aathmanesan,"Micro Patch Antenna for next generation mobile application",NCKIETS-2021,2021.
22. Aanandha Saravanan K ,Sathyasri B, Aloy Anuja Mary G,Farithkhan A, Vignesh Prassana N, Ezhilrasan M R, "Women Safety Maneuver in Real Time Scenarios", 8th International Conference on Smart Structures and Systems, ICSSS 2022.
23. Aloy Anuja Mary G, Farithkhan A, Vishnukumar S, Aanandha Saravanan K ,Sathyasri B," Cumulative Sum Algorithm for Threshold Optimization in Cognitive Radio Networks", 8th International Conference on Smart Structures and Systems, ICSSS 2022.
24. Harikrishna Paik and Smrutisree Paik, "A CPW Fed Printed Antenna for Gain and Directivity Improvement using FSS Reflector," 2022 IEEE International Conference on Advances in Technology (ICONAT 2022), GOA, India. Jan 22-23, 2022
25. Harikrishna Paik and Smrutisree Paik, "A Compact Frequency Selective Surface based X band Spatial Bandstop Filter Realization," 2022 IEEE International Conference on Emerging Technologies (INCET 2022), Belgaum, India. May 27-29, 2022.
26. Harikrishna Paik and Smrutisree Paik, "A Frequency Reconfigurable Printed Antenna using PIN Diode for Mobile Terminal Application," 2021 IEEE International Asian Conference on Innovation in Technology (ASIANCON), Pune, India. Aug 28-29, 2021.
27. D. Vaithiyanathan, Sanket Mukund Sonar, J Britto Pari, K.Mariammal and K Kunaraj, "Performance Analysis of Full Adder Circuit Using Conventional and Hybrid Techniques", Proc. IEEE Madras Section International Conference (MASCON 2021), Chennai, India, August 27 – 28, 2021.
28. N. Vinodhkumar,M. G. Rajendrakumar, S. Muthumanickam, "Performance Analysis of Gray to Binary Code Converter Using GDI Techniques", 2nd International Conference on Recent Trends in Machine Learning, IoT, Smart Cities and Applications, vol. 237, pp. 419-429, 2021.

29. M. Valliammai, J. Mohanraj, N. Vinodhkumar, T. Kanimozhi, S. Sridevi and S. Addanki, "Phase Changing Material based Multi/Demultiplexer with Photonic Crystal Waveguide Couplers for Optical Communication," 2022 Workshop on Recent Advances in Photonics (WRAP), 2022, pp. 1-2, doi: 10.1109/WRAP54064.2022.9758380
30. T, Kanimozhi and S, Sridevi and M, Valliammai and J, Mohanraj and N, Vinodh Kumar, "Quantum Regression Model for the Prediction of Surface Plasmon Resonance Sensor Behaviour," 2022 Workshop on Recent Advances in Photonics (WRAP), 2022, pp. 1-2, doi: 10.1109/WRAP54064.2022.9758179.
31. M. Valliammai, J. Mohanraj, T. Kanimozhi and S. Sridevi, "Design of all-optical Chalcogenide T-flip flop using Photonic Crystal Waveguide," 2021 International Conference on Numerical Simulation of Optoelectronic Devices (NUSOD), 2021, pp. 133-134, doi: 10.1109/NUSOD52207.2021.9541504.
32. Mr.Vijaya Vardan Reddy SP, Dr.B.Sathyasri, A.Balaji, S.Vanaja, Rahul Krishnan, Y.Deepika, "Automatic Number Plate Recognition System for Entry and Exit Management" 6th International Conference on Communication and Electronics Systems, ICCES 2021.
33. Mr.Vijaya Vardan Reddy SP Dr.B.Sathyasri A.Balaji S.Vanaja Rahul Krishnan Y.Deepika "Future Driver assistant with reconfigurable on -Board Diagonistics System", 5th International Conference on I-SMAC (IoT in Social, Mobile, Analytics and Cloud), I-SMAC 2021, 2021, pp. 988–992.
34. M.Anandan, J.Hemalatha, R.Priyanka, M.Prathyusha' " Design of 2X2 Millimeter wave Microstrip Antenna for 5G Applications with Defective Ground Structure",AICTE sponsored 5th National conference on Knowledge Based Inventive Electronics & Telecommuication Systems,(NCKIETS-2021) on 25th - 27th August 2021 conducted by KKR &KSR Institute of Technology and Sciences, Guntur, AP, proceedings book published with ISBN: 978-81-951436, pp.55-57, 2021.
35. Aldrin Karunharan., K., Kanmani Pappa, C., Ruby, E.D.K., Sathyasri, B., Edwin Shanthakumar, W."Automatic Detecftion of White Blood Cancer From Blood Cells Using Novel Machine Learning Techniques"8th International Conference on Advanced Computing and Communication Systems, ICACCS 2022, 2022, pp. 79–85.
36. M. R. Ezilarasan, J. B. Pari, K. Aanandhasaravanan, N. V. Prasanna, and D. Balaji, "Performance analysis of ICA algorithm for Blind Source Separation," 8th Int. Conf. Smart Struct. Syst. ICSSS 2022, 2022, doi: 10.1109/ICSSS54381.2022.9782254.
37. Sreelakshmy.R,M Srilekha and Saam prasanth Dheeraj"Split Ring Resonator Based Slotted Rectangular Microstrip Patch Antenna For Radar Communication", 2nd International Conference on Advances in Computational Science and Engineering(ICACSE),2021.
38. Rahul, S. G., R. Chitra, A. Eswar Sai, Seeram Sai Sudheer, Amruthavalli Archakam, and Avinash Reddy. "Supervisory Virtual Instrumentation For Secured Chemical Process Plant Monitoring." In 2021 Innovations in Power and Advanced Computing Technologies (i-PACT), pp. 01-06. IEEE, 2021.
39. Rahul, S. G., Rajnikant Kushwaha, Sayantan Bhattacharjee, Agniv Aditya, K. Somasekhar Reddy, and Durri Shahwar. "Soldier Strap For Health Monitoring And Tracking A Proposed Solution." In 2021 Innovations in Power and Advanced Computing Technologies (i-PACT), pp. 1-7. IEEE, 2021.
40. Rahul, S. G., N. Kirn Kumar, R. Chitra, K. Dinesh Ram, A. Eswar Sai, and P. Arshiya Shahina. "Development of Virtual Instrumentation System for Industrial Power Quality Analysis." In 2021 4th International Conference on Computing and Communications Technologies (ICCCT), pp. 370-375. IEEE, 2021.
41. Rahul, S. G., R. Chitra, Seeram Sai Sudheer, Palevla Venkata Naga Ravi Teja, Amruthavalli Archakam, and Jaswanth Reddy Modium. "Model Based Cardiac Control System For The Left Heart Using LabView." In 2021 Innovations in Power and Advanced Computing Technologies (i-PACT), pp. 1-6. IEEE, 2021.

42. Chitra, R., S. G. Rahul, Amruthavalli Archakam, Sai Pramitha Meesala, Jaswanth Reddy Modium, and Jagadish Kumar Pakalapati. "Analysis of Baroreflex Function in Cardiovascular Variability Model." In 2021 Innovations in Power and Advanced Computing Technologies (i-PACT), pp. 1-5. IEEE, 2021.
43. Rahul, S. G., R. Chitra, Manasa Madabhushi, and M. Kavya. "Virtual Instrumentation System Design for a Secured Chemical Process Industry Automation." In Innovations in Mechanical Engineering, pp. 653-661. Springer, Singapore, 2022.
44. Rahul, S. G., R. Chitra, Vulichi Puneeth Kumar, Palla Hima Sai Abhishek, and Boggula Obula Reddy. "Virtual Instrumentation Based Graphical User Interface for Fermentation Bioprocess Monitoring Using LabVIEW." In Innovations in Mechanical Engineering, pp. 783-795. Springer, Singapore, 2022.
45. Chitra, R., G. Srinivasa Sudharsan, S. G. Rahul, Seeram Sai Sudheer, and Archakam Amruthavalli. "Microwaves in Healthcare Systems for Cancer Detection." In Innovations in Mechanical Engineering, pp. 771-782. Springer, Singapore, 2022.
46. S.Sakthivel, Preethika Immaculate Britto, K.Shamugananthini, S.Vijayalakshmi, A.Paramasivam and E.Sankaran, "Recuperation from Hamstring muscle injuriy using a novel-indigenously developed highly compatible prototype", International Conference on Communication and Electronics Systems, 8-10July 2021
47. S.Kannadhasan, R.Nagarajan, S.Thenappan, "Intrusion Detection Techniques Based Secured Data Sharing System for Cloud Computing Using MSVM" ,2022 9th International Conference on Computing for Sustainable Global Development (INDIACom),Pg;50-56, Mar. 2022.
48. K. Malaisamy, S. Sathiya Priya, V. Koushick, M. Mahendran, Mohd.Wasim, "Design and Development of Microstrip Array Antenna for Satellite Applications", International Conference on Communication and Computing Technolgies for Sustainable Development (ICCCTSD 2022), Feb 2022.
49. K. Malaisamy, M. Santhi, G. Sivakannu, V. Koushick, S. Sathiya Priya, " Design of a Compact Monople Antenna for UWB Applications", International Conference on Communication and Computing Technolgies for Sustainable Development (ICCCTSD 2022), Feb 2022.
50. Vinoth, Mohamed Ali, V. Koushick, Thangapandi, Leema Nelson, "A 2 x 1 Wearable Periodical Array Antenna for IEEE Standards P802.11 Ay/D4.O Applications", International Conference on Smart Technologies and Applications-2022 (ICSTA 2022), March 2022
51. Vinoth Kumar V, Sasikala G, Anto Bennet M, "IoT Based Real Time Health Care Monitoring System Using PIC Micro Controller" EFM2T'21,2021.
52. R Ramasamy, R Rajkumar, Sathyamoorthy Sellapillai, M Vasim Babu, CNS Vinoth Kumar" A Compact UWB MIMO Antenna for IoT Applications" 3rd IEEE International Virtual Conference on Innovations in Power and Advanced Computing Technologies, i-PACT 2021.
53. Ramasamy R, Anto Bennet M, Balasubramaniam D, Vasim Babu M "A Compact Dual Band E Shaped Circular Patch Antenna For Iot Applications" EFM2T'21,2021.
54. Vasim Babu, M., Vinoth Kumar, C.N.S., Baranidharan, B., Madhusudhan Reddy, M., Ramasamy, "R. Energy-Efficient ACO-DA Routing Protocol Based on IoEABC-PSO Clustering in WSN" ,Lecture Notes on Data Engineering and Communications Technologies, 2022, 114, pp. 139–155
55. M. R. Ezilarasan, J. B. Pari, K. Aanandhasaravanan, N. V. Prasanna, and D. Balaji, "Performance analysis of ICA algorithm for Blind Source Separation," 8th Int. Conf. Smart Struct. Syst. ICSSS 2022, 2022, doi: 10.1109/ICSSS54381.2022.9782254.

56. B. M, L. F. Telfer, S. Mandal, T. Vijay and J. K. Saha, "Design and analysis of sickel shape patch antenna with flexible non-woven material for IoT applications," 2022 International Conference on Advanced Computing Technologies and Applications (ICACTA), pp. 1-5,IEEE,2022
57. C Malarvizhi, M Brenda, S Baskar and J Joselin Jeya Sheela,"Design and Optimization of CPW-Fed Bow-Tie Slot Patch Antenna",Journal of Physics: Conference Serie, Advances in Computational Electronics and Communication Engineering,vol :1964(6), 2021
58. B.Venkataramanaiah, Naveen kumar, vishnu vardhan, prasanna kumar,"Early prediction of brain disorders by Machine learning classifiers" in the 3rd international conference on multidisciplinary innovations in Academic research (IFERP) held on 25-26th November 2021 at Chennai.
59. B.Venkataramanaiah, Naveen kumar, vishnu vardhan, prasanna kumar," "Early prediction of Cardiovascular diseases by using machine Learning classifiers" in International conference on Next Generation wireless communication and networking technology for smarter world (ICNGTSW-2022) at RMK engineering college on 28th April 2022 to 29th April 2022.
60. Suma Nair, Srividhya R , Lekshmi , and N Aishwarya Lakshmi ,"Asynchronous Carry Look Ahead adder using Energy Efficient Pipeline Adder"3rd International Conference on InnovationsCommunication, Computing and Sciences " held on August 2021 in Chandigarh .
61. Srividhya Ramanathan , Suma Nair , Aishwariya Lakshimi , Rithwik Halder ,Harshavardhan Naidu"Smart Device For Women Safety Using Machine Learning Based Logic Regression Algorithm" in the 3rd International Conference on Innovations Communication, Computing and Sciences " held on August 2021 in Chandigarh .
62. R. Jenila, C. Kanmani Pappa & C. Supraja "A Smart and Precision Agriculture System Using DHT11 Plus FPGA" International Conference on Machine Learning and Autonomous Systems ICMLAS2021, vol. 269, pp. 579 - 589, Feb 2022.
63. Vinod K S "Internet Of Things Based Smart Car Parking And Reservation Handling System Using Modified Learning Scheme", Second International Conference on Emerging Trends in Materials, Computing and Communication Technologies, 'ICETMCCT 2021' DEC 2021
64. Vinod K S," Clustering Techniques for Enhancing Supervised Classifiers in Anomaly Detection", International Conference on Artificial Intelligence and Machine Learning,,'IAIM2022',JAN2022
65. Vinod K S, "Performance Comparison of Screen Sharing Applications", 'International Conference on Emerging Trends in Electrical and Electronics Engineering,'ICETEEE21',OCT2021
66. RajeshKumar.D, Dhananjeyan.R, Sangeetha.T, "A very Compact Printed DGS Antenna for ULTRA WIDE BAND Application", "International Virtual Conference on Emerging Trends in Electrical, Electronics, and Computer Technology (E TECH - 2022),26th May 2022.

Student Publications 2021 – 22

1. G.Sasikala,Nookala Sai Venkata Raghavan,Shaik Nasir,Veerendranath reddy ," A New Paradigm in Cultivation Observing System Using NodeMCU and Blynk Application", Lecture Notes on Data Engineering and Communications Technologies, Volume 126, Pages 431 – 4452022.
2. Dr.Senthil Kumar , Dr.Kavitha Thandapani , Asritha Manju Immadisetty , Ruchitha Chilukuri, "Structural Health Monitoring of Power Line using Bragg Sensor", Webology, Vol.16, No.6, pp:33-43,2021
3. T.Kavitha, Asritha Manju Immadisetty , Ruchitha Chilukuri "Structural Health Monitoring of Power Line using Bragg Sensor", International Symposium Advances in Computational Intelligence and Heuristic Application (ACIHA 2021) 10th and 11th November 2021
4. Dr. T Kavitha, Lekkala Manoj Kumar Reddy, "Performance Evaluation of Radio Over Optical Fiber Device With OFDM Multiplexing Techniques", AICTE Sponsored national conference on Recent Innovations in Computation and Communication Technology, GRT Institute of Engineering and Technology, Tiruttani. On 11th April 2022
5. Dr. T Kavitha, K.Rani Swetha, S.Manisha,, "Simulation based Evaluation of OFDM in Radio Over Fiber (ROF) using Opti-System and MATLAB", AICTE Sponsored national conference on Recent Innovations in Computation and Communication Technology, GRT Institute of Engineering and Technology, Tiruttani. On 12th April 2022
6. Shiyamala S.;Bhuvaneshwaran G.;Reddy, Chejerla Om Prakash,"Autonomous object recognition and collision avoidance for micro aerial vehicles with effective and cost-efficient sensor. AIP Conference proceedings, 2022
7. Lingaiah Jada, Shiyamala S. ," Investigation On GFDM System For 5G Applications Over Fading Channels".Journal of Engineering Science and Technology Review, Vol.13, Issue 3, 2022
8. Meena A , Shiyamala.S, "Low power enhanced trivium implementation using parallel-pipeline technique" 1st IEEE International Conference on Smart Technologies and Systems for Next Generation Computing, ICSTSN 2022
9. Nitesh Gaikwad , S.Shiyamala, "Design and Development of Microarchitecture for Dynamic IoT Communication",International Journal of Engineering Trends and Technology Volume: 69,Issue :11, PP 1-8,2021.
10. Jana, S., Thangam, S., Kishore, A., Kumar, V.S., Vandana, S., "Transfer learning based deep convolutional neural network model for pavement crack detection from images", International Journal of Nonlinear Analysis and Applications, vol.13, no. (1), pp. 1209–1223, 2022
11. S Jana, S Thangam, Saddapalli Vandana, Venkata Sai Kumar, Annem Kishore, "Deep Learning Based Identification of Plant from Leaves" , in First Virtual International Conference on Advances in Signal Processing Communications and Computational Intelligence, Dept. of ECE, CMR Technical Campus, Hyderabad, 23rd -24th July 2021.
12. Jana S, Bharanidharan N , Shanmukha Nagasai P, Saravan Kumar K, Mani Nageshwar V, "Diabetes Prediction Using Machine Learning Algorithms," 2022 8th International Conference on Advanced Computing and Communication Systems (ICACCS),, pp. 46-51, 2022, doi: 10.1109/ICACCS54159.2022.9785073
13. S Jana, T Srinivasa Usha Sri, V Niharika, G Balaji, "A Transfer Learning Approach for Sorting and Grading of Fruits", AICTE sponsored National Conference on Communication and Signal Processing Systems,RMK College of Engineering, 8-9 Dec 2021

14. Dr.G.Aloy Anuja Mary , Abishek S, Aparna Sekhar Rs,"Comparison Study Of Non Orthogonal Multiple Access Scheme With Orthogonal Multiple Access Scheme",Communication and Signal Processing systems,2021.
15. M.Anandan, Chennupathi Lokesh ,Hemant reddy Nandipatti, Valluri Lakshmi Prasanna ," Optimal Cooperative data transmission over SC-FDMA Channel estimation on LTE-A based Networks" International journal of creative research thoughts (IJCRT), ISSN : 2320-2882,Vol10, Issue 5, May 2022,pp.a639-a644,
16. M.Anandan, J.Hemalatha, R.Priyanka, M.Prathyusha,"Design of 2X2 millimeter wave Microstrip Antenna for 5G Applications with Defective Ground Structure", AICTE sponsored 5th National conference on Knowledge Based Inventive Electronics & Telecommuication Systems, (NCKIETS-2021) on 25th - 27th August 2021 conducted by KKR &KSR Institute of Technology and Sciences, Guntur,AP, Conference Proceedings book published with ISBN: 978-81-951436, pp.55-57. conducted by KKR &KSR Institute of Technology and Sciences, Guntur,AP
17. Sreelakshmy.R,M Srilekha and Saam prasanth Dheeraj"Split Ring Resonator Based Slotted Rectangular Microstrip Patch Antenna For Radar Communication", 2nd International Conference on Advances in Computational Science and Engineering(ICACSE),2021
18. Rahul, S. G., R. Chitra, A. Eswar Sai, Seeram Sai Sudheer, Amruthavalli Archakam, and Avinash Reddy. "Supervisory Virtual Instrumentation For Secured Chemical Process Plant Monitoring." In 2021 Innovations in Power and Advanced Computing Technologies (i-PACT), pp. 01-06. IEEE, 2021.
19. Rahul, S. G., Rajnikant Kushwaha, Sayantan Bhattacharjee, Agniv Aditya, K. Somasekhar Reddy, and Durri Shahwar. "Soldier Strap For Health Monitoring And Tracking A Proposed Solution." In 2021 Innovations in Power and Advanced Computing Technologies (i-PACT), pp. 1-7. IEEE, 2021.
20. Rahul, S. G., N. Kirn Kumar, R. Chitra, K. Dinesh Ram, A. Eswar Sai, and P. Arshiya Shahina. "Development of Virtual Instrumentation System for Industrial Power Quality Analysis." In 2021 4th International Conference on Computing and Communications Technologies (ICCCT), pp. 370-375. IEEE, 2021.
21. Rahul, S. G., R. Chitra, Seeram Sai Sudheer, Palevla Venkata Naga Ravi Teja, Amruthavalli Archakam, and Jaswanth Reddy Modium. "Model Based Cardiac Control System For The Left Heart Using LabView." In 2021 Innovations in Power and Advanced Computing Technologies (i-PACT), pp. 1-6. IEEE, 2021.
22. Chitra, R., S. G. Rahul, Amruthavalli Archakam, Sai Pramitha Meesala, Jaswanth Reddy Modium, and Jagadish Kumar Pakalapati. "Analysis of Baroreflex Function in Cardiovascular Variability Model." In 2021 Innovations in Power and Advanced Computing Technologies (i-PACT), pp. 1-5. IEEE, 2021.
23. Rahul, S. G., R. Chitra, Manasa Madabhushi, and M. Kavya. "Virtual Instrumentation System Design for a Secured Chemical Process Industry Automation." In Innovations in Mechanical Engineering, pp. 653-661. Springer, Singapore, 2022.
24. Rahul, S. G., R. Chitra, Vulichi Puneeth Kumar, Palla Hima Sai Abhishek, and Boggula Obula Reddy. "Virtual Instrumentation Based Graphical User Interface for Fermentation Bioprocess Monitoring Using LabVIEW." In Innovations in Mechanical Engineering, pp. 783-795. Springer, Singapore, 2022.
25. Chitra, R., G. Srinivasa Sudharsan, S. G. Rahul, Seeram Sai Sudheer, and Archakam Amruthavalli. "Microwaves in Healthcare Systems for Cancer Detection." In Innovations in Mechanical Engineering, pp. 771-782. Springer, Singapore, 2022.

26. Dr. V. Koushick, Shaik Mouseen, Vemula Harinath Reddy, Theddu Mukesh Reddy, " Design and Analysis of Stripline Antenna for Body Communication", First Conference in Latest Advancements in Science, Management, Commerce and Educational Research (LASMCER-2022), June 2022
27. Dr. V. Koushick, Dinesh Kumar, Akesh Kumar, Uma Mahesh " Design of Microstrip Slot Antenna for 5G Communication", First Conference in Latest Advancements in Science, Management, Commerce and Educational Research (LASMCER-2022), June 2022
28. A.Farithkhan , D.Teja , K.Sindhu Mary , M.Naveena ,"Design Of Decentralized Control For Swarm Of Uavs", AICTE Sponsored National Conference on Communication and Signal Processing Systems (NCCSS 2021).
29. Muthumari, M., V. Akash, K. Prudhvi Charan, P. Akhil, V. Deepak, and S. Phani Praveen. "Smart and Multi-Way Attendance Tracking System Using an Image-Processing Technique." In 2022 4th International Conference on Smart Systems and Inventive Technology (ICSSIT), pp. 1805-1812. IEEE, 2022.
30. Muthumari, M., V. Akash, K. PrudhviCharan, and P. Akhil. "A Novel Model for Emotion Detection with Multilayer Perceptron Neural Network." In 2022 6th International Conference on Intelligent Computing and Control Systems (ICICCS), pp. 1126-1131. IEEE, 2022.
31. B.Venkataramanaiah, Naveen kumar, vishnu vardhan, prasanna kumar,"Early prediction of brain disorders by Machine learning classifiers" in the 3rd international conference on multidisciplinary innovations in Academic research (IFERP) held on 25-26th November 2021 at Chennai.
32. B.Venkataramanaiah, Naveen kumar, vishnu vardhan, prasanna kumar," "Early prediction of Cardiovascular diseases by using machine Learning classifiers" in International conference on Next Generation wireless communication and networking technology for smarter world (ICNGTSW-2022) at RMK engineering college on 28th April 2022 to 29th April 2022
33. S. Aswath, C. M. S. Kumar, K. Reethi, B. Deepthi, K. Chikitha, and S. Rupesh, "Enhancing the Performance of Classifiers in Detecting Abnormalities in Medical Data using Nature Inspired Optimization Techniques," 2022, doi: 10.1109/ICONAT53423.2022.9726096.
34. P. Divya Bharathi , V. Pranav Raj , P. Suresh Kumar , S. Venkata Narayana Reddy, "Food Management based on Face Recognition",International Journal of Innovative Science and Research Technology ,ISSN No:-2456-2165.
35. Supraja C, Ashok N,Jeethendra K,Naveen Kumar D"mm-Wave And Sub 6GHZ Spectrum Analysis In 5G Network",12th International Conference On Science And Innovative Engineering,June 2022 Proceedings.
36. Vinod K S,CH. Harish Babu,K.Shiva Kumar ,M. Narayana Reddy ,""Performance comparison of screen sharing Applications""Design Engineering Vol 9 pg 420-427,,2021
37. Mr.Rajesh kumar,Manchu leela prakash,Dasari gokul, "Design And Development Of Mobile Phone Antenna For Future Cellular Applications",International Virtual Conference on Emerging Trends in Electrical, Electronics, and Computer Technology (E TECH - 2022),26th May 2022.
38. J.Sumanth, P.Akhil, P.S.S.V.Vinay Mahesh, D.RajeshKumar, "Design Of Printed Antenna For Next Generation Wi-Fi Devices"International Virtual Conference on Emerging Trends in Electrical, Electronics, and Computer Technology (E TECH - 2022),26th May 2022.

Patent Granted (2021 - 22)

Graphene Based Dome Shaped Phase Array Antenna for Space Communication

Patent No: 33613
Application No:3866/CHE/2014

Inventors:

1. **Mr. R. Prasanna**
2. **Dr. R. Gowrishankar Rao**
3. **Dr. N. G. Renganathan**

Umbrella Based Duality Module for Future Space Technology

Patent No: 383696
Application No:6848/CHE/2015

Inventors:

1. **Mr. R. Prasanna**
2. **Mr. S. Manoj Aravind**
3. **Mr. Chaman Shishodia**
4. **Adarsh Kumar Gupta**

Book Chapter Published

S. No	Name of author	Title of the paper	Name of the journal/Conference	Vol.No., Issue No., Page No.,Year of publication	Vol. No. of binded book	Page No. of binded book
1.	Dr.S.Ayshwarya lakshmi,Dr.T.Kavitha,Dr.S.Jana	Problem solving and python programming	JBR TRI SEA PUBLISHERS	2021	Comm_vol. 1	123
2.	Dr Nagarajan p,Dr Kavitha Thandapani,Dr Malliga Lakshmanan	Advanced Embedded System Design	LAP LAMBERT Academic Publishing	2021	Comm_vol. 1	124
3.	C. R. Bharathi,Alapati Naresh	A Node Authentication Model in Wireless Sensor Networks with Locked Cluster Generation	IGI Global, USA	pp 236-250,2021	Comm_vol. 1	247
4.	T. Vignesh, K. K. Thyagharajan, L. Balaji & G. Kalaiarasi	Implementation And Performance Analysis Of Various Models Of Pcnn For Medical Image Segmentation, Intelligent Computing And Innovation On Data Science	Springer	LNNS,volume 248,(pp.73-84),2021	Comm_vol. 2	52
5.	Dr.L.Balaji,A.Dhanalakshmi	Satellite Communication	ARS Publications	2021	Comm_vol. 2	90
6.	Dr.M.Anandan,Rajeshwari and Gobinath Arumugam	Suppression of Radiated Emission in High Speed Printed Circuit Board using Defected Ground Structure	LAP LAMBERT Academic Publishing	2021	Comm_vol. 2	270

Student Enrichment (2021 - 22)

The department provides different platform, for the students to participate in various technical fest, sports events, and cultural activities. The list of events our students participated and brought laurels to our department as given below:

1. K.Deva Reddy (VTU17157) has won Second Prize in “Matlab coding contest” organized by Veltech Rangarajan Dr Sagunthala R&D Institute of Science and Technology.

2. Y Bindu Sai Priya (VTU14161) has won first prize in the “Joy of Creativity through Colors” at Veltech Rangarajan Dr Sagunthala R&D Institute of Science and Technology.

3. Harshaditya (VTU15490) has won First Prize in “VISAI 2022” organized by Veltech Rangarajan Dr Sagunthala R&D Institute of Science and Technology.

4. Tadiparthi Vijay Ganesh (VTU14469), Yasala Bhavya Sri (VTU14472) has won Second Prize in “VISAI 2022” organized by Veltech Rangarajan Dr Sagunthala R&D Institute of Science and Technology.

5. Gaddipati Sri Harsha (VTU13898) has participated Security Challenges in Cognitive Radio Networks in Holycross Engineering College 2021.

6. Tadiparthi Vijay Ganesh (VTU14469) has presented paper in International Conference on Electronics and Sustainable Communication Systems conducted by Hindusthan Institute of Technology on August 2021.

7. Kodakandla Karan reddy (VTU11826) has received Nptel course certificate on Introduction to Internet of Things conducted by IIT Kharagpur.

8. Kodakandla Karan reddy (VTU11826) has received online course certificate on Python and Machine Learning Fundamentals from Perfect plan B Elearning Private Limited.

9. Kodakandla Karan reddy (VTU11826) has received online course certificate on Introduction to cyber security from Great Learning Academy.

10. Nallapaneni Vamsi (VTU11648) has received online course certificate on Python and Machine Learning Fundamentals from Perfect plan B Elearning Private Limited.

11. Nallapaneni Vamsi (VTU11648) has received online course certificate on JAVA from Skillup by Simplilearn.

Student Enrichment (2021 - 22)

Mr. Pradumn Kumar (vtu16150) (Batch 2019 - 2023) has got a Gate Score of 367 and also secured All India Rank 6510

Mr. Kirupa Krishnan G (vtu12005) has won second place in the event held during Kurukehetra 2022 at College of Engineering Gunidy, Anna University from 5/4/2022 to 8/4/2022.

Reddilatha and Ravi Chandra Reddy has published research paper entitled “Remote Sensing Using Hybrid Access Cognitive Femtocell Networks in Wireless Communication”


Remote Sensing Using Hybrid Access Cognitive Femtocell Networks in Wireless Communication

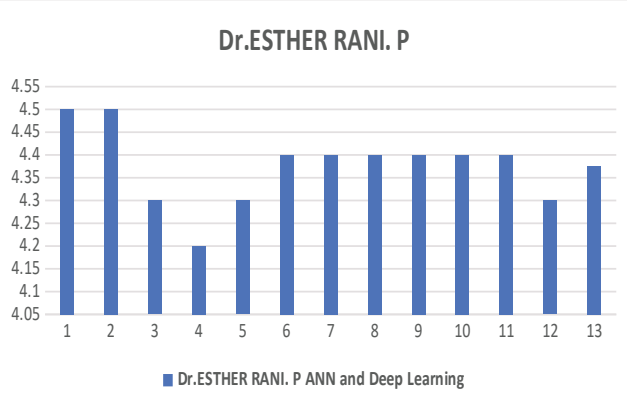

Performance analysis of WDM free space optics transmission system using MIMO technique under various atmospheric conditions

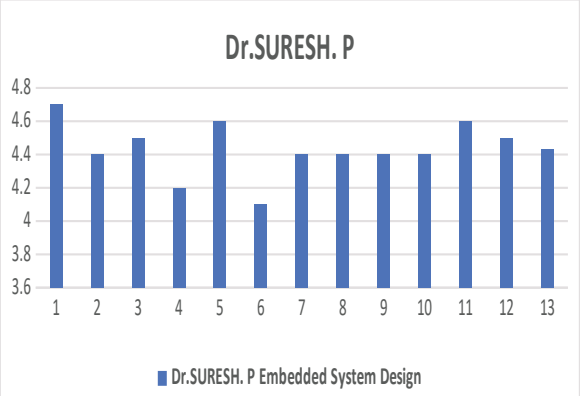
Sravani Jagarlamudi and Naveen Babu Sriram has published research paper entitled “Performance analysis of WDM free space optics transmission system using MIMO techniqueunder various atmospheric conditions”

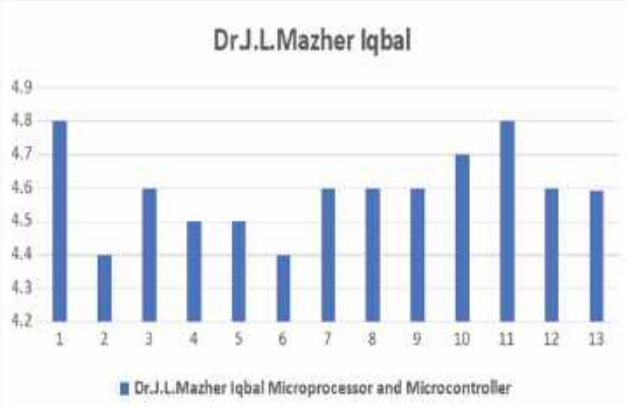
Student Satisfaction 2021-22

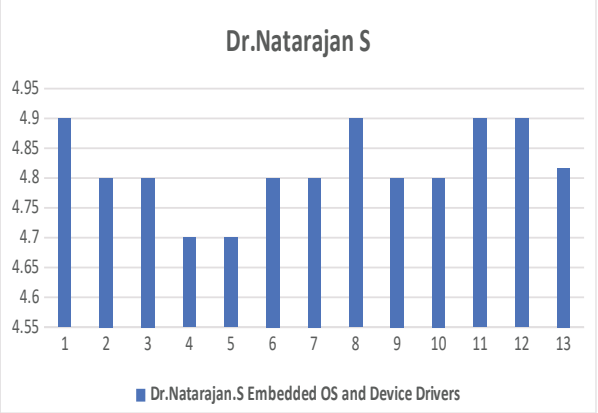
Feedback on Course Delivery

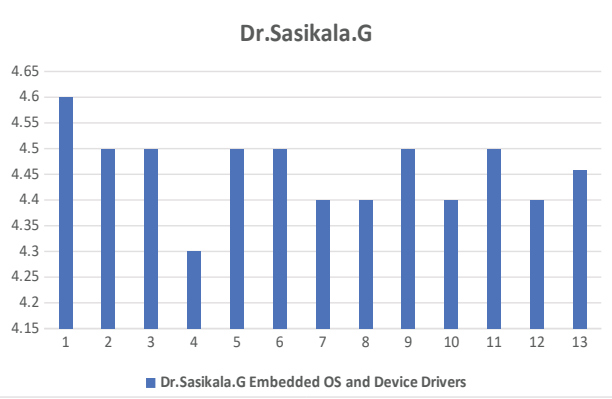
Professors

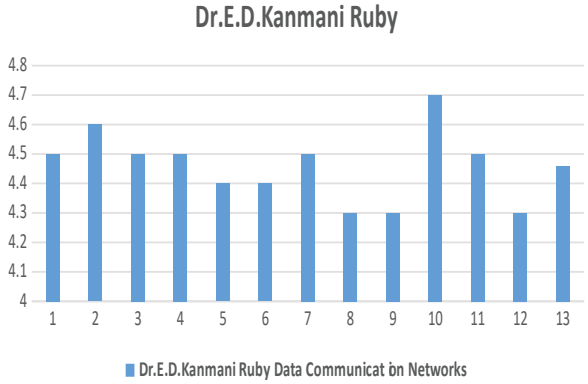




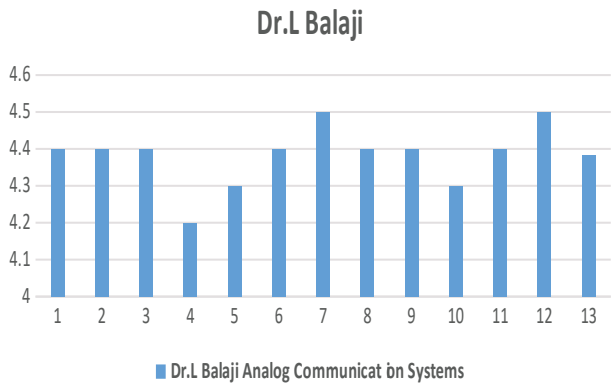


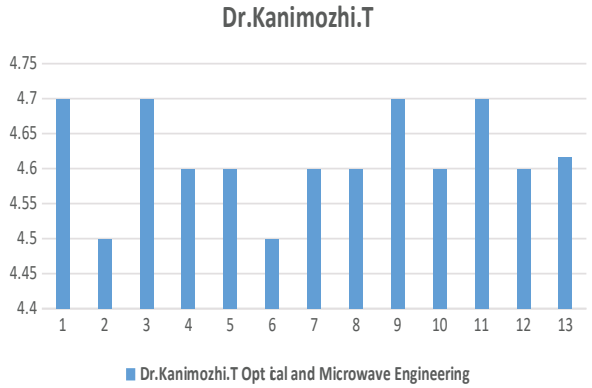


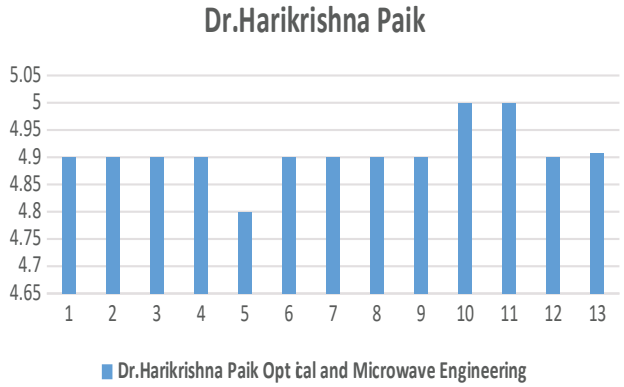


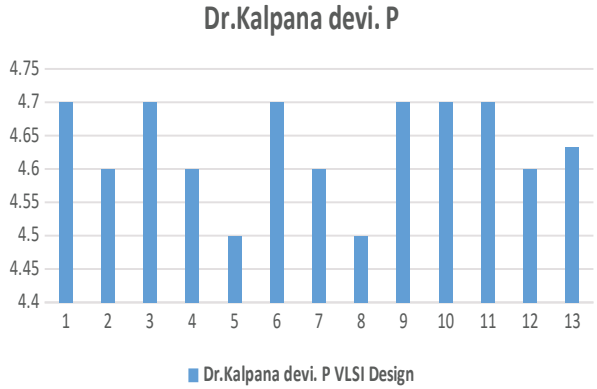


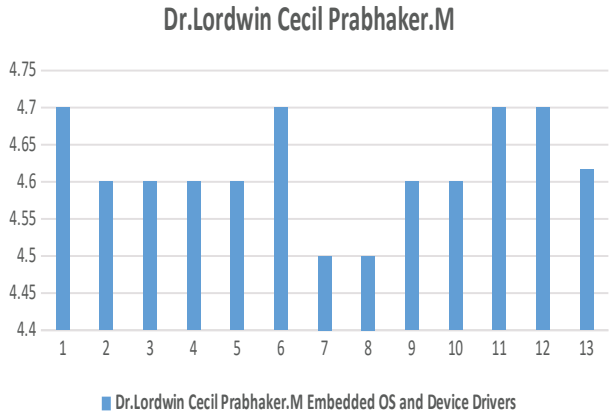
Associate Professors

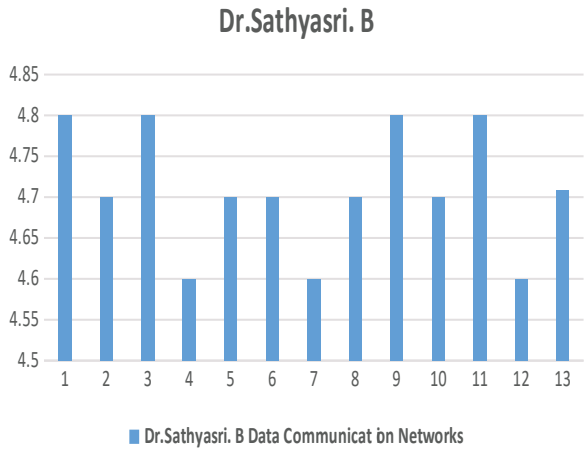




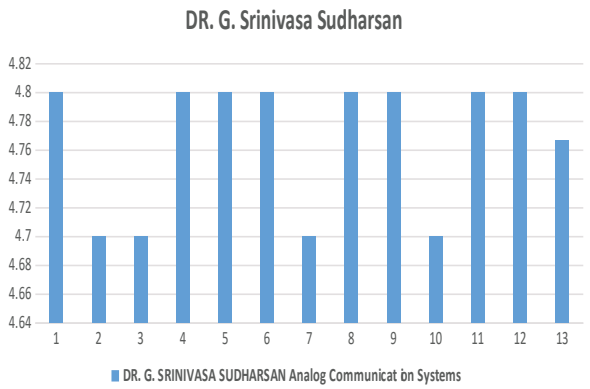


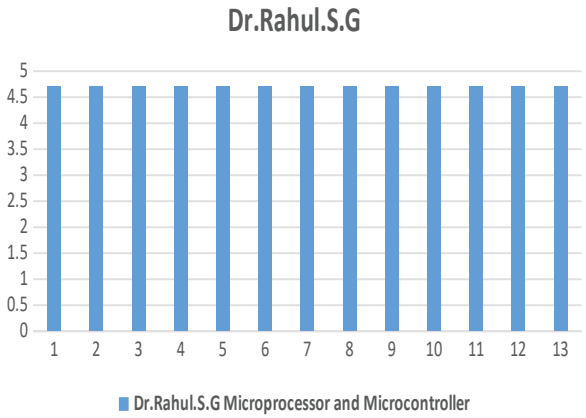


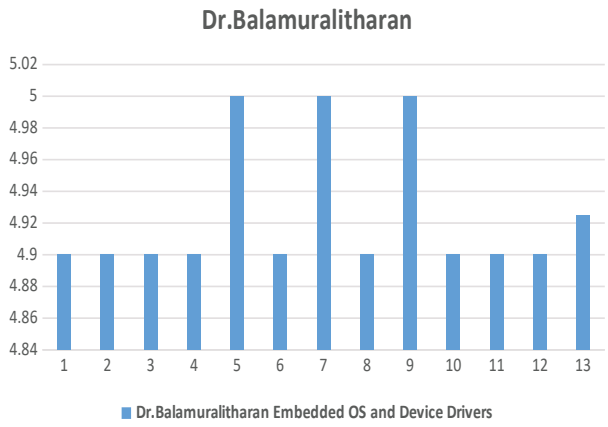


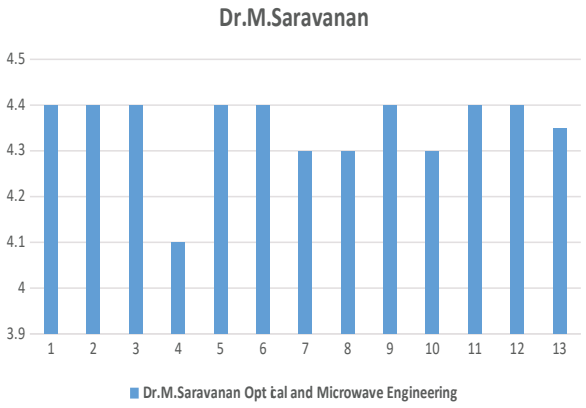


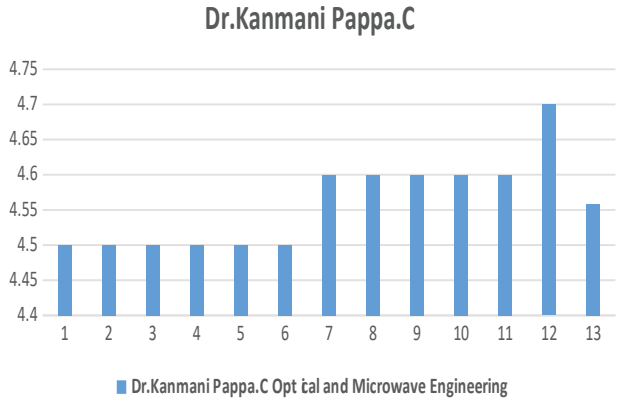
Assistant Professors

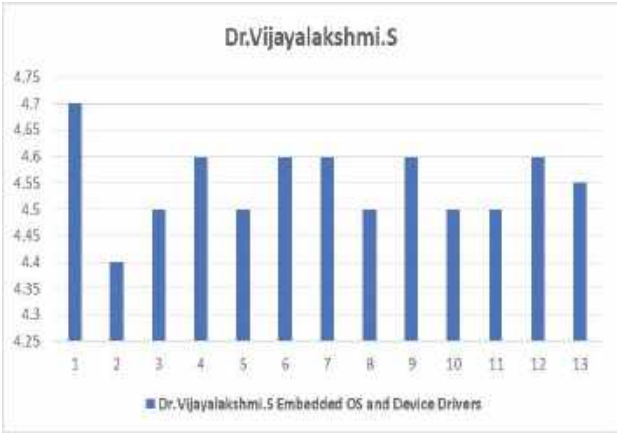












Feedback on Course Delivery

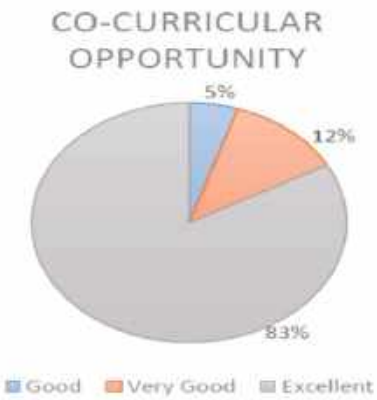
FEEDBACK TEMPLATE

- I heard words and phrases of Teacher and understood clearly in the classroom.
- The Teacher explained important concepts / ideas in ways that I can understand.
- Students were encouraged to ask questions and were given meaningful answers.
- The Teacher took extra care for slow learners.
- The Teacher used appropriate teaching techniques to enhance my learning.
- I could access required materials easily for my learning activities.
- I have learned and understood the subject materials of this course.
- The Teacher discussed all the course outcomes clearly in the class.
- The Teacher completed syllabus portion in-time before tests / exams.
- The Teacher assessed and evaluated students fairly.
- The Teacher showed evaluated answer scripts of Unit / Mid – term tests to the students.
- The Teacher was dynamic and energetic in conducting the course.

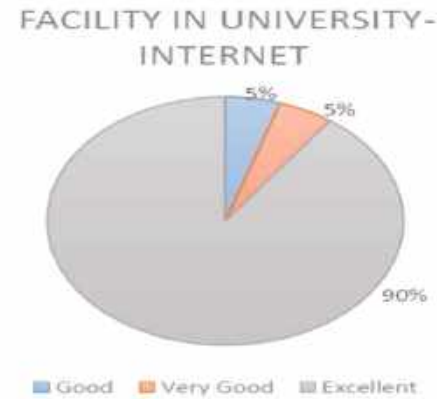
Observation on Course Delivery Feedback

Interim Feedback is collected every semester from the students to measure the effectiveness of the course delivery by the faculty members on the course and to incorporate corrective measures in the course delivery methods by the faculty if any. The interim feedback graph analyses for the academic year 2021 - 22 on different courses are given. From the analysis it is ensured the faculties of ECE Department are well qualified and are performing well.

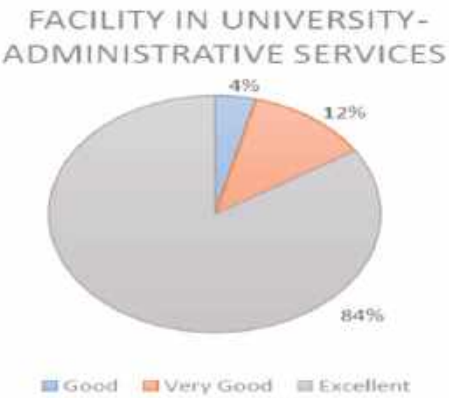
Feedback on Curriculum and Program End Feedback




FACILITY IN UNIVERSITY-
CARRIER GUIDANCE
5%
10%
85%
Good
Very Good
Excellent

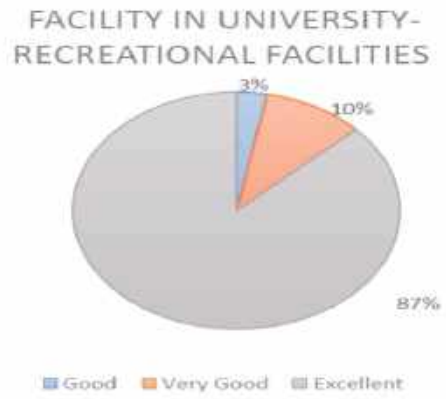

FACILITY IN UNIVERSITY-
INTERNET
5%
5%
90%
Good
Very Good
Excellent


FACILITY IN UNIVERSITY-
CLASS ROOM AMBIENCE
5%
12%
83%
Good
Very Good
Excellent


FACILITY IN UNIVERSITY-
ADMINISTRATIVE SERVICES
4%
12%
84%
Good
Very Good
Excellent


FACILITY IN UNIVERSITY-
TRANSPORTATION FACILITY
2%
13%
85%
Good
Very Good
Excellent


FACILITY IN UNIVERSITY-
CANTEEN
2%
13%
85%
Good
Very Good
Excellent


FACILITY IN UNIVERSITY-
RECREATIONAL FACILITIES
3%
10%
87%
Good
Very Good
Excellent


FACILITY IN UNIVERSITY-
HOSTEL
5%
10%
85%
Good
Very Good
Excellent

Observation on Curriculum and Program End Feedback

An extensive survey with queries related to curricular, Co-Curricular and Extra-curricular activities, was conducted in the department during the course of the B.Tech Programme 2018-2022 and summarized below.

CURRICULUM

- The students were also asked to give their feedback on curriculum.
- It was observed that 80% of the students had replied that no changes are required in curriculum.
- However, a few had suggested that curriculum could be updated with more integrated and skill development courses.
- The skill levels of the subject handling faculty were rated high in the survey.
- The students specified that the academic environment in the department was highly professional.

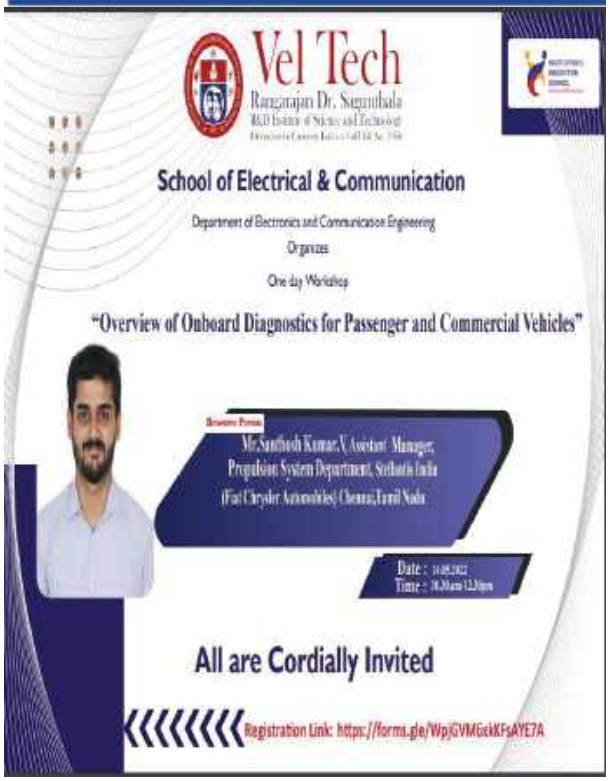
CO-CURRICULAR

- The library facility in the university and in department was greatly appreciated by the students with the high rating in survey.
- There were suggestions requesting to arrange industrial visits at least one per academic year.

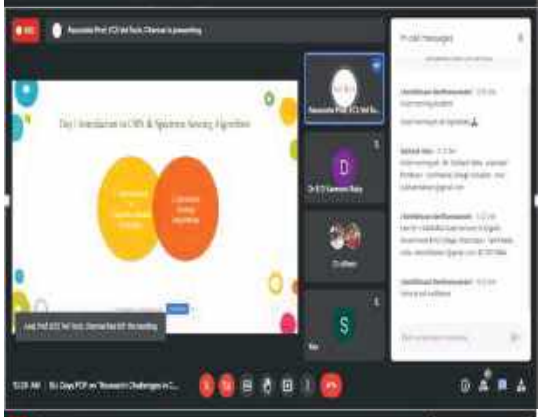
EXTRA CURRICULAR

- More than 80% of students have responded well to very good level of satisfaction with education at both institute and department level.
- The recreational facility at university and hostel, classroom ambience, internet facility and the administrative services at university were rated high.

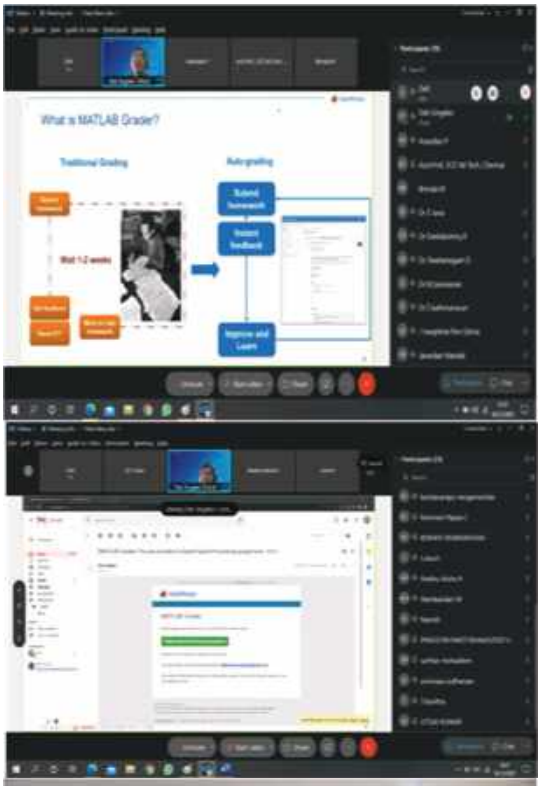
Events Organized (2021 - 22)



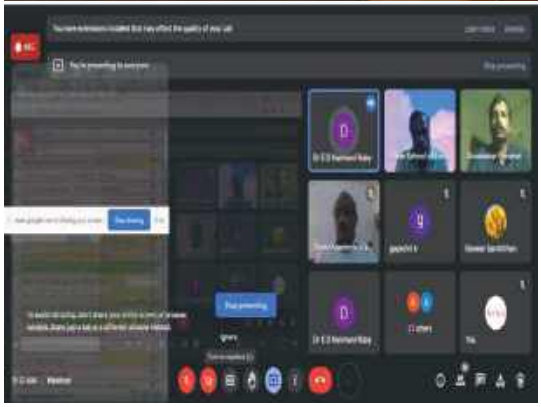
Events Organized (2021 - 22)



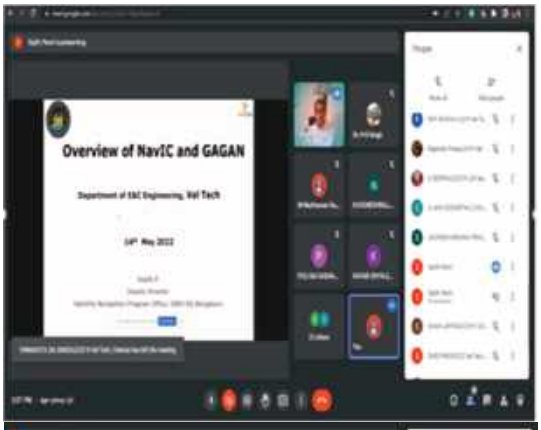
Events Organized (2021 - 22)

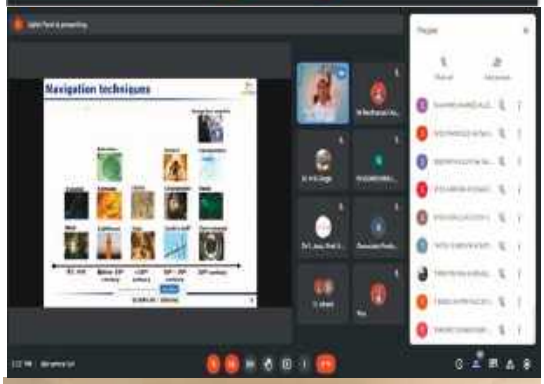


Events Organized (2021 - 22)



Events Organized (2021 - 22)

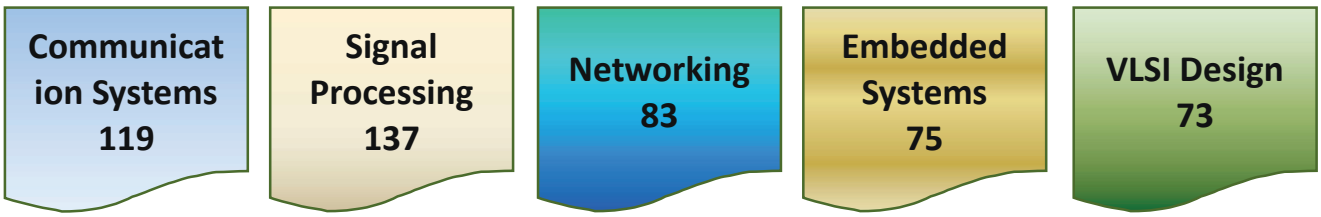




Events Organized (2021 - 22)

Minor Project Work (2021 – 22)

In-House



Top Projects:

1	**Students Name :**	V.Kishen Kumar, G.Rakesh Kumar Reddy, G.Guru Praveen Kumar Reddy
	Project Title :	Virtual care taker online patient monitoring system using IOT
2	**Students Name :**	Akshay Kumar P Akshay Kumar P, Robert Jerold, Kumaran
	Project Title :	LPG Gas level indicator with low quantity alert with Automatic Bokking using IOT
3	**Students Name :**	M.Nikhileswara sri venkat, S.V.N.Rupesh, D.Venkatesh
	Project Title :	Design Development of graphical user interface to monitor and control a bioreactor
4	**Students Name :**	J.Sravya Nandini, A.Srisujitha, P.Mounika
	Project Title :	FPGA Based obstacle detection for blind personnel
5	**Students Name :**	Nandipati Hemanth Reddy, Chennupati Lokesh, Gali Kartheek
	Project Title :	Design of Smart Devices for the detection of Infectious Disesases
6	**Students Name :**	Bomidi Durga Bhaskar, Kutala Konda Gopi, Vinnakota Sai Dinesh
	Project Title :	FSS Based band stop microwave filter realization
7	**Students Name :**	G.Murali Vikash , P.Dileep Kumar, Y.Yogitha Devi
	Project Title :	Health Care Monitoring System using LIFI Technology

Major Project Work (2021 – 22)

In-House

Top Projects:

1 **Students Name :** Soubhik Mandal, G.Rakesh Kumar Reddy, V.Kishen Kumar
Project Title : Blockchain based smart voting management System

2 **Students Name :** Y.Sasidhar, M.Srinivasa Reddy, G.Pradeep
Project Title : Disaster Area Network Expansion using drones based AD-HOC Cellular Communication

3 **Students Name :** Seeram Sai Sudheer, Muraharirao Nikhileswara Sri Venkat, Archakam Amruthavalli
Project Title : Smart Social distance Monitoring Robot for COVID safety

4 **Students Name :** S.Suguna Shandana, M.Ahalya
Project Title : Performance Analysis of D-Flipflop using different techniques

5 **Students Name :** A.Supriya, T.Shyamaladevi, V.Sneha reddy
Project Title : Analysis of frequency selective surface based SPATIAL X -BAND BANDSTOP FILTER

6 **Students Name :** Achanta Sai Mani Teja, Miriyala Naveen, Indla Ajay
Project Title : Artificial intelligence aided generation networks relying on UAV'S

7 **Students Name :** O.Venkata Ashok Kumar, Dudekula Azaruddin, T.Sundupalli Balaji
Project Title : Behavioral analysis of human beings using deep learning

Industry Students Major Project Work Details

1	**Students Name :**	N Pavithra, U.Susmitha
	Project Title :	Smart grow lighting sysytem for agriculture
	Company Name :	LED Chip Indus Pvt Ltd Hyderabad
2	**Students Name :**	Kattekota Chikitha, V.V Enkata Chaithanya
	Project Title :	Smart street light control and man hole monitoring
	Company Name :	LED Chip Indus Pvt Ltd Hyderabad
3	**Students Name :**	Bollineni vinay, Gangireddy guru praveen kumar reddy
	Project Title :	Measurement of gamma radiation with detector
	Company Name :	Nucleonix Systems Pvt Ltd, Hyderaba
4	**Students Name :**	Kummari nikhil, Santosh kumar yarabati, Ram dinesh reddy
	Project Title :	Smart Battery Swapping Station
	Company Name :	VOLTME MOTORS, Hyderabad
5	**Students Name :**	A. Tejaswini, Reethik rao, K. Aiswarya rao
	Project Title :	Autonomous Electric Vehicle
	Company Name :	VOLTME MOTORS, Hyderabad
6	**Students Name :**	Chillangi chaitanya kumar, Salla vardhan,G. Lalith sai
	Project Title :	Universal charging infrastructure design and development for two wheeler electric vehicles
	Company Name :	VOLTME MOTORS, Hyderabad
7	**Students Name :**	Amara sri sai ganesh,Rajnikant kushwaha
	Project Title :	Alpha Scintillation monito
	Company Name :	Nucleonix Systems Pvt Ltc, Hyderabad
8	**Students Name :**	P .Hemanvitha, A .Sparsha
	Project Title :	Design and simulation of a simple voting machine using verilog hdl
	Company Name :	ECIL, Hyderabad

Abroad Project Details:

1	**Students Name**	:	Hasitha Gunnam
	Project Title	:	Diagnosis of Autism spectrum disorder in children : Data preprocessing and Firs Models
	University	:	University of Tours, France.
2	**Students Name**	:	Vajja Likhitha,Niraj Kumar
	Project Title	:	Smart waste management system based on IoT Technology and Ap development
	University	:	University of Foreign Studies, South Korea.
3	**Students Name**	:	Amit Sikder
	Project Title	:	Simulation of a DigitalController of a Buck Converter
	University	:	Deggendorf Institute of Technology (DIT), German
4	**Students Name**	:	I. Asritha Manju
	Project Title	:	Implementation Of Grpahical User Interface For Controller Desig
	University	:	Deggendorf Institute of Technology (DIT), German
5	**Students Name**	:	Meesala Sai Pramitha, Kasula Rakesh
	Project Title	:	An Analysis of Traffic Congestion and Visualization of AVL GPS Data Study in Ha
	University	:	University of Foreign Studies, South Korea.
6	**Students Name**	:	M.Kavya Nikhita
	Project Title	:	Deep Learning Architecture for Multimodal sentiment Analysi
	University	:	Hankuk University of Foreign Studies (HUFS), South Korea
7	**Students Name**	:	Swapnil Datta
	Project Title	:	Future Internet- 5g And Beyonc
	University	:	Hankuk University of Foreign Studies (HUFS), South Korea

Major Project Viva-Voce Photos:

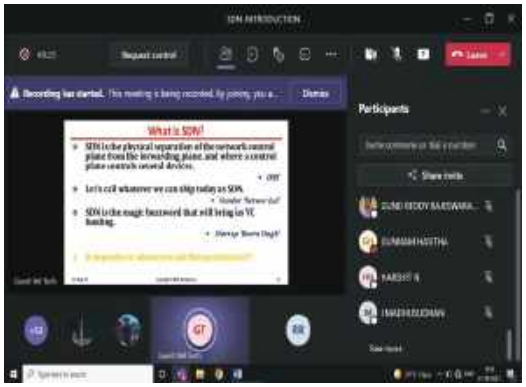


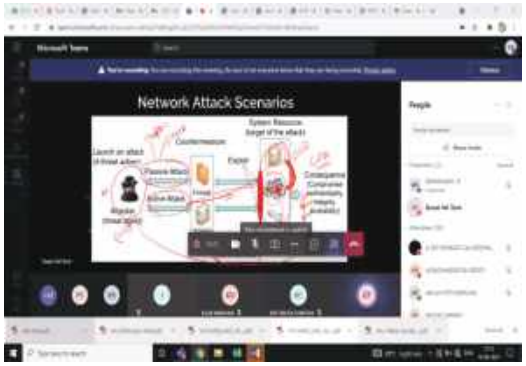


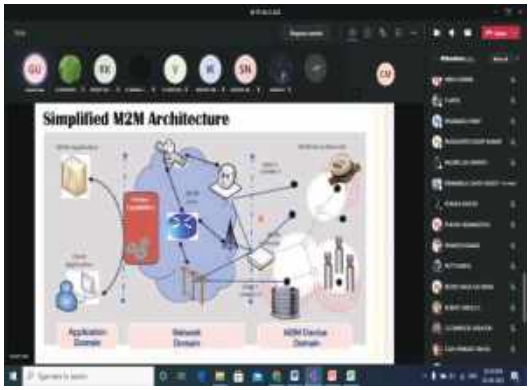

One Credit Course offered by Experts from Industry & Higher Learning Institutes Abroad

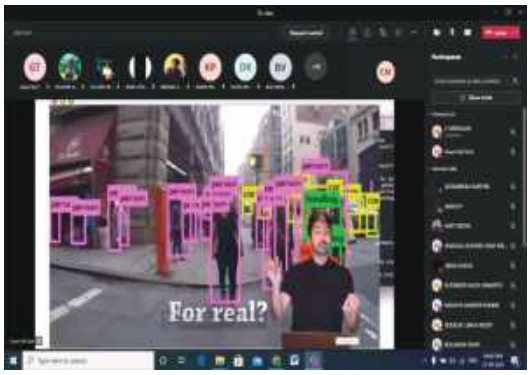
2021 - 22 WINTER SEMESTER

- **Real Time Systems and Internet of Things**
  Dr.Biju Bajracharya, Assistant Professor, Department of Computer Science East Stroudsburg University, United States.
- **Remote Sensing and Digital Image Processing**
  Dr. Raju Aedla, Kurokami chuo ku, Kumamoto shi, Kumamoto,JAPAN,
- **Security Essentials of Cyber Attacker**
  Dr.Biju Bajracharya, Assistant Professor Department of Information Systems and Operation Management, the Ball State University, Muncie, Indiana.
- **IoT and Artificial Intelligence**
  Dr.Ahmed Abdelgawad,Associate Professor of Computer Engineering,Central Michigan University ET100, Mount Pleasant, MI, 48859, USA.
- **Security and Privacy in 6G Networks**
  Dr. Naveen Chilamkurti, Associate Professor, Department of Computer Science and Information Technology,La Trobe University, Melbourne, Australia.
- **Artificial Intelligence for IoT**
  Dr.Celestine Iwendi, Research Coordinator Senior Lecturer-School of Creative Technologies University of Bolton, United Kingdom Distinguished Speaker, ACM.IEEE Brand Ambassador
- **Real Time Systems and Internet of Things**
  Dr. Jeyaprakash (Jey) Chelladurai, "Assistant Professor, Department of Computer Science, East Stroudsburg University,United States.
- **Data Science**
  Mr. Sonal Singh, Lead Data Scientist – Enquero, Cpg, Retail, Marketing Analytics.
- **Micro Electro Mechanical Systems (MEMS)**
  Dr. Pandiyarasan.V,Assistant Professor at Indian Institute of Information Technology Design & Manufacturing Kancheepuram..





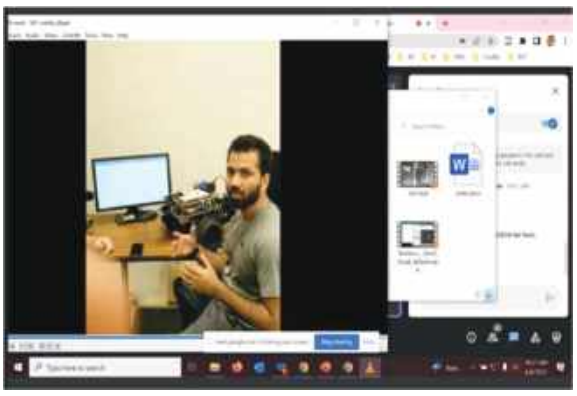




One Credit Course offered by Experts from Industry & Higher Learning Institutes Abroad

2021-2022SUMMER SEMESTER

- **Software Defined Networking**
  Mr. Saurabh Mandal, Scientist 'E' Center for Artificial Intelligence & Robotics - DRDO Bangalore.
- **Cyber Security**
  Mr. Himanshu Kumar Haran, Scientist E Center for Artificial Intelligence & Robotics – DRDO Bangalore.
- **Micro Electro Mechanical Systems (MEMS)**
  Dr. Pandiyarasan.V,Assistant Professor at Indian Institute of Information Technology Design & Manufacturing Kancheepuram.
- **Network Function Virtualization**
  Mr. Surya Teja Marella, Head - Operations Gooffer Hyperlocal Pvt Ltd Hyderabad.
- **Machine to Machine Communication**
  Mr. Sandeep Shroff, Founder, CEO Autointell Services Pune.
- **Deep Learning**
  Mr. Anand Krishnan Iyer, "Project Manager Nesma Saudi Arabia.
- **System On Chip Design**
  Mr. Ananthavelan,Senior Engineer, Microchip Technologies, Chennai.
- **Data Science**
  Mr. Syed Misbah, Lead Data Scientist Evalueserve Bengaluru.
- **Current trends in Communication and Diagnostics in Automotive**
  Mr. Balaji Balasubramanian, Assistant Consultant Tata Consultancy Services Chennai.



Professional Bodies

The students are encouraged to undertake various academic and non-academic activities through Professional Bodies and different clubs associated with the department and the Institute. In the department level we have the actively functioning “IEEE Signal Processing Society”.

The Department of Electronics and Communication Engineering successfully inaugurated the IEEE Student Branch Chapter of the IEEE Signal Processing Society on 13.05.2022. IEEE Membership offers access to technical innovation, up-to-date information, networking opportunities, and member benefits. IEEE members enjoy reduced costs on many products and services like IEEE books, funding for projects, journals, conferences, society memberships, and continuing education courses.

IEEE Societies provide members with opportunities to connect with experts locally and abroad while staying up to date on technology and trends. The student members get a chance to develop their interpersonal skills, leadership skills and teamwork skills by making us involved in various event organizations and management.

- IEEE Student Membership Cost: 27 US Dollars
- Society Membership cost for students: 1 US Dollars

About IEEE Signal Processing Society

The IEEE's first society, the Signal Processing Society is the world’s premier professional society for signal processing scientists and professionals since 1948. Signal processing is the enabling technology for the generation, transformation, and interpretation of information. SPS serves its members through high-quality publications, conferences, technical and educational activities, and leadership opportunities. Its goal is to keep members abreast of the latest information and to serve the public at large. Founded as IEEE’s first society in 1948, the Signal Processing Society is the world’s premier association for signal processing engineers and industry professionals.

Engineers around the world look to the Society for information on the latest developments in the signal processing field. Its deeply rooted history spans almost 70 years, featuring a membership base of more than 19,000 deeply interested and involved signal processing engineers, academics, industry professionals and students who are all part of a dynamic global community – spanning 100 countries

worldwide. The Society organizes numerous conferences around the world every year, focusing on the innovations shaping the future of signal processing and the future of our world. Members have opportunities to be involved in boards and committees, and at the local level members are actively immersed in regional chapters, working on issues and projects that shape what's next in signal processing. The Society also oversees the publication of numerous periodicals, including the IEEE Signal Processing Magazine and the Inside Signal Processing eNewsletter.

Faculty Coordinators

The IEEE Signal Processing society Student Branch Chapter is coordinated by the following faculty members:

Dr. Rahul S G (TTS2865)
Assistant Professor - ECE
IEEE SPS Faculty Advisor
Overall IEEE Coordinator of ECE Department

Ms. Subha K J (TTS3332)
Assistant Professor - ECE
Signal Processing Domain level IEEE Coordinator

Office Bearers of IEEE Signal Processing Student Chapter

Issac K (VTU14974)

Chairman

Membership No: 97093507

2019-2023 Batch

M. Jaswanth Reddy (VTU15253)

Vice Chairman

Membership No: 98016709

2019-2023 Batch

Akula Tharun (VTU15233)

Secretary

Membership No: 98061430

2019-2023 Batch

P.V.N. Ravi Teja (VTU12958)

Joint Secretary

Membership No: 97716835

2019-2023 Batch

P. Jagadish Kumar (VTU14527)

Treasurer

Membership No: 98085359

2019-2023 Batch

***M. Karthik*(VTU15834)**

Joint Treasurer

Membership No: 98068630

2019-2023 Batch

S. Sai Teja (VTU15318)

Technical Activity Chair

Membership No: 98164070

2019-2023 Batch

***B. Sai Raghav* (VTU13260)**

Webmaster

Membership No: 98068630

2019-2023 Batch

***J. Rahul Babu* (VTU13743)**

Joint Webmaster

Membership No: 9806870

2019-2023 Batch

***Rakesh. R* (VTU15234)**

Event Coordinator

Membership No: 98065864

2019-2023 Batch

***Partho Adhikari* (VTU16243)**

Event Coordinator

Membership No: 98065028

2019-2023 Batch

Events Organized

"Logo Design Contest"was Organized by the IEEE Signal Processing Student Branch Chapter of Vel Tech Rangarajan Dr Sagunthala R&D Institute of Science and Technology as a preliminary event on **29.04.2022** from 2:45 to 3:45 pm before the inauguration held on **13.05.2022**. The Main Theme of this Contest was to design a logo for Vel Tech IEEE Signal Processing Society by the Students of the ECE department. The students were encouraged to develop the Logo on the mentioned theme and given a certain time to make the Logo for around a week.

The event commenced with the Registration of Students participating and the welcome address was delivered by Mr K. Issac, 3rdyear student ECE who took charge as Chairman of the student Brach Chapter during the inauguration. The event was then followed by the presentation of Logos designed by participants. Students were given two minutes of duration to address the information about the Logo they designed, followed by a Questionnaire by Judges. Around 17 Students Participated in the Event. In the end, Both the Judges, Dr. P. Esther Rani, HoD/ECE and Dr. S. Jana, Professor/ECE and gave valuable suggestions to improve furthermore in upcoming events.

"Inauguration of IEEE Signal Processing Society Student Chapter" was held in Vel Tech Rangarajan Dr Sagunthala R&D Institute of Science and Technology under the Department of ECE on **13.05.2022** with 111 attendees. The event commenced at 2:30 PM with the prayer song, continued with the lighting of the lamp by all the dignitaries. The gathering was welcomed by Dr. P. Esther Rani, HoD-ECE. Later, a special address given by respected Dr. V. Jayasankar, Dean SoEC about IEEE SPS. Felicitation address was given respected by Dr. Koteeswaran, Dean of Research Studies and IEEE Branch Counsellor. Then respected Dr. M.J Carmel Mary Belinda, Dean Academics in-Charge, continued the felicitation address and then respected Dr. Kannan, Registrar gave a few valuable inputs to the peers about the student chapter events and awards. Followed by, the Honorable Vice Chancellor, Prof. Dr. S. Salivahanan gave the Felicitation address to the gathering and provided an insight on the scope of being a part of the student chapter. Then the Respectable Chief Guest Dr. N. Venkateswaran, Chairman IEEE SPS Madras Section gave the Inaugural Address and unveiled the Logo of IEEE SPS Vel Tech. In continuation, the Swearing in Ceremony of the following Office bearers of IEE SPS Vel Tech took.

Reception

Dignitaries of the Inaugural Ceremony


13.05.2022

Invocation and Lighting of lamp

Presenting Memento to the Dignitaries

Inaugural Address by the Dignitaries

Swearing-in ceremony of Office Bearers

IEEE Signal Processing Student Branch Chapter conducted a **Guest Lecture on "Signal Processing in Machine learning and Artificial Intelligence"** by the invited speaker Dr. N. Venkateswaran, on **13.05.2022** from 3:45 to 4:45 PM. The lecture began at 3:45 PM with basic Terminologies in Signal Processing, Machine Learning and Artificial Intelligence. The guest discussed various Real-time applications of Signal Processing in the daily aspects and presented an overview of the following topics to the students.

- *Signal Processing Techniques*
- *Introduction to Machine learning*
- *Basic Terminologies in Machine Learning*
- *Types of Machine learning Algorithms*
- *Different Classifiers in Machine Learning*
- *Real-Time Case Studies on Machine Learning*
- *Introduction to Deep Learning*
- *Real-Time Case Studies on Deep Learning*

After the Discussion of the above topics, a doubt clarification session was held. A few Students asked about various project ideas and research ideas related to Signal Processing Domain and Dr. N. Venkateswaran answered the same. The Guest Lecture ended with the Vote of Thanks by Dr. S. Jana, Professor-ECE.

A three days' workshops on **"Data Visualization using Tableau and Power Bi: Theory and practice"** was conducted from **31.05.2022 to 02.06.202**. The workshop on Data Visualization using Tableau and Power Bi: Theory and practice was organized to provide the participant with the knowledge and awareness of the state-of-the-art technology of Data Visualization and its applications which would kindle them to do research and projects using Tableau and Power Bi tools. In the recent years, Tableau and Power Bi are highly required in many Industries. The resource person for the webinar was Mr. Kishore Rangaraj, Senior Data Analyst, Accenture, Bangalore who has rich experience in programming as applied to Data Visualization.

The coordinator of the workshop, Dr.S.Jana, Professor/ECE welcomed the gathering and addresses the need for knowledge in Data Visualization and the significance of the workshop. Dr.V. Jayasankar, Dean SoEC felicitated the gathering. In his felicitation address, he said that more such events should be organized for the benefit of students. Earlier Ms.Subha KJ, Assistant Professor/ECE, introduced the resource person. Mr. Kishore Rangaraj made the session interesting with his presentation. Dr.S. Jana delivered the vote of thanks. Feedback from the participants was commendable and positive statement that the workshop was informative, beneficial, and well organized. From this 3 days' workshop, students have learned how tableau can be applied to solve some of the real-time data visualization challenges. Without tableau, it is really difficult to explain any engineering results, suppose, in the case of complex machine learning tasks it is really hard to explain a technical person but tableau makes this end-user process easier through its graphical user interface dashboard which is easily explainable to non-coding person.

"Project Expo 2K22" was held on **03.06.2022** by the IEEE Signal Processing Society Student Branch Chapter of the ECE Department in Gallery Hall. The event aimed to display various hardware projects carried out by all branches of students as a knowledge-sharing event. Participants formed a team with a maximum of four members. The various themes covered almost all the domains of Electronics Engineering, Electrical Engineering, Computer Science Engineering, Biomedical Engineering, Aerospace Engineering and Mechanical Engineering. In total, 39 batches participated. The projects were visited by the faculty and students of the ECE department, and the participants explained their projects and their applications in a brief manner. A team of panel members reviewed all the projects and year-wise best projects were selected and awarded.

Project Expo 2K22

Department Club Activities

Department Clubs

Association of Communication Engineers

The Association of Communication Engineers (ACE) club of ECE department was inaugurated in the year 2015. The club organizes periodically non-technical events; social and community out reach programs such as Guild of Service for the professional and psychological development of student engineers and acts as platform for the students to showcase their literary skills and creativity. It promotes fine arts, art appreciation, and interactive events. It also provides opportunities for the development of management and communication skills. The club focuses on both personal and professional growth of an individual as well as the growth of the club.

Faculty Coordinator

Mrs.V.Diana Earshia

Assistant Professor -ECE

Office Bearers

Devansh Reddy(VTU14637)

Secretary
Batch 2018-2022

Tadiparthi Vijay Ganesh(VTU14469)
Treasurer
Batch 2019-2023

HamsaVarshini**(VTU**11625)
Executive Member
Batch 2018-2022

Kirubashree**(VTU**18867)

Executive Member
Batch 2019-2023

M.Bhuvaneshwar (VTU17271)

Executive Member
Batch 2020-2024

Likithitha(VTU21632)

Executive Member
Batch 2020-2024

Joy of Creativity though colors

Date of Event: 30.03.22
“Joy of creativity through colors”, is a non-technical event, conducted to student community, so that they can exhibit their talent through drawing. It has made the student community to get a break from their present-day scenario.

Students have to do creative drawing for the topic “Conceptual kaizen”.

Concept drawings or sketches are drawings, often free-hand, that are used by designers such as architects, engineers, and interior designers as a quick and simple way of exploring initial ideas for designs

Kaizen is a Japanese term meaning "change for the better" or "continuous improvement." It is a Japanese business philosophy regarding the processes that continuously improve operations and involve all employees. Kaizen sees improvement in productivity as a gradual and methodical process.

The event was conducted on 30th march 2022.

The following rubrics were followed for evaluating;

1. Aptness to the theme (5)

2. Comments (5)

3. Presentation (5)

4. Uniqueness (5)

Decision of the co-coordinator will be final.

This event has made the students think about their own kaizen that can be brought to reality for the betterment of life.

Photos during the event


Haste from Waste

Date of Event: 29.04.22

"Haste from Waste", is a non-technical event conducted for the student community, so that they can exhibit their talents by making useful products from waste materials. This creates awareness among the students to reduce, recycle and reuse the used materials in another form. Several creative products were made by the students. The word haste most commonly refers to urgency, such as in completing a task. It can also be used as another word for speed or swiftness, as in we have to move with haste if we want to make it on time. This is how the word is used in the phrase making haste, which means to move quickly, hurry up, or rush.

The event was conducted on 29th April 2022.

The following rubrics were followed for evaluating;

1. Aptness to the theme (5)

2. Comments (5)

3. Presentation (5)

4. Usefulness (5)

Decision of the Judges will be final.

This event has made the students to think about reduce, recycle and reuse, which can be brought to reality for the betterment of life.

Photos during event




Photos during prize distribution


Engineers Without Borders Club

The students are encouraged to undertake various academic and non-academic activities through Professional Bodies and different clubs associated with the department and the Institute. We have "Engineers Without Borders Club" at department level. Engineers Without Borders India builds a better world through engineering projects that empower communities to meet their basic human needs. Our highly skilled volunteers work with communities to find appropriate solutions for their infrastructure needs. This Motivation EWB Club was inaugurated in our department on the date 12 September, 2020.

EWB India is an Evolving Network of Humanitarian Engineers and Other Professional in India. The vision of EWB is to nurture and motivate students and professionals to undertake real life sustainable social projects and create Global Leaders. The Mission of EWB is to partner with corporate & social organizations, involve students and professionals, and offer sustainable solutions in the areas of Water, Sanitation, Energy, Health & Education to improve the quality of life for common people.

EWB Club provides members with opportunities to connect with experts locally and abroad while staying up to date on technology and trends. The student members get a chance to develop their interpersonal skills, leadership skills and teamwork skills by making us involved in various event organizations and management.

About Engineers Without Borders Club

EWB-International (EWB-I) was founded in 2004 by Prof. Bernard Amadei, the founder of EWB-USA. EWB-I seeks to promote collaboration so that collectively we can achieve more than the sum of our parts and fulfill our mission. EWB-I brings together engineers, students and anyone with a passion for helping disadvantaged communities improve their quality of life. EWB-I focuses on both education and the implementation of sustainable engineering projects at the grassroot level. The term Engineers Without Borders is used by a number of non-governmental organizations in various countries to describe their activity based on engineering and oriented to international development work. All of these groups work worldwide to serve the needs of disadvantaged communities and people through engineering projects.

Many EWB national groups are developed independently from each other, and so they are not all formally affiliated with each other, and their level of collaboration and organizational development varies. The majority of the EWB/ISF organizations are strongly linked to academia and to students, with many of them being student-led. Our members work hard to ensure that the communities they serve benefit as much as possible from every project whilst our Board ensures that each project gets the funding it needs to achieve its full potential.

Each member group is fully independent and autonomous collectively we aim at; 1. Contribute to meeting the MDGs and SDGs through capacity building in local projects 2. Collaborate on projects and studies worldwide 3. Share ideas, experiences, technical knowledge, and documentation 4. Develop partnerships on community projects 5. Address more global issues and projects 6. Coordinate student exchanges, internships, and professional volunteers 7. Advertise meetings and events 8. Train and connect engineering professionals and students around the world. 9. Create synergy between their members.

Faculty Coordinators

The faculty coordinators of the Engineers Without Borders Club are as follows:

Dr. S.Vijayalakshmi

Assistant Professor / ECE

Engineers Without Borders Club -Coordinator

Mrs. P. Janani

Assistant Professor / ECE

Engineers Without Borders Club - Coordinator

Office Bearers of Engineers Without Borders Club

V. Mani Nageswar (VTU12987)

Secretary

2018-2022 Batch

Padma Sri Kavitha Vankayala (VTU15458)

Treasurer

2019-2024 Batch

Raveena Upputuri (VTU11435)

Executive Member

2018-2022 Batch

GallaGiridhar(VTU15412)

Executive Member

2019-2023 Batch

M.Pavan Arun Kumar(VTU17567)

Executive Member

2020-2024 Batch

Kotamarthi Mery Varjeeniya **(VTU13996)**

Executive Member

2020-2024 Batch

Develop Leaders by Investing in People

The objective of the Develop Leaders by Investing in People is to create an understanding of sustainable world and develop new technologies for sustainable world.

Topic: Sustainable World

Sustainability means meeting our own needs without compromising the ability of future generations to meet their own needs. In addition to natural resources, we also need social and economic resources. World is a common name for the whole of human civilization, specifically human experience, history, or the human condition in general, worldwide, i.e. anywhere on Earth

Instructions:

1. Competition will be held on 05.04.2022 at Conceive Space –ECE Department.
2. Competition will be held in Offline mode.
3. Candidates can participate as Individuals only.
4. The competition is open to all interested candidates.
5. Participants have to carry their own materials.
6. Participants can develop their own ideas.
7. All the participants will get Participation certificate.
8. Winner and Runner-up candidates will get prizes.
9. Failure to comply with any of the rules, terms and conditions of the competition may result in disqualification of the contest.

Event Photos

Robotics Club

Robotics club at ECE department was inaugurated in the year 2018 that strives to stimulate interest in robotics among undergraduate students in the department. The Club offers essential guidance, workshops and tutorials along with tools, equipment, components and workspace by which students will be proficient to compete national and international level robotics contests.

Robotics club provide members with opportunities to connect with experts locally and abroad while staying up to date on technology and trends. To conduct Competitive Events based on Robotic projects. The intentions are to provide technical support to the interested participants of Robotic competitions.

ROBOTICS ECE CLUB

Faculty Coordinators

The faculty coordinators of the Robotics Club are as follows:

Dr. M. Anandan
Associate Professor- ECE

Mrs.V.Mahalakshmi
Assistant Professor - ECE

Office Bearers of Robotics Club

RAVI RANJAN KUMAR (VTU11777)
Secretary
2018-2022 Batch

B. SAI RAGHAV (VTU13260)
Treasurer
2019-2023 Batch

Prabin Nyabane (VTU131606)
Executive Member
2018-2022 Batch

CH.SRI PRIYANKA (VTU13734)
Executive Member
2019-2023 Batch

A.VARAPRASAD (VTU16025)
Executive Member
2020-2024 Batch

M.THRIDHAMNI (VTU18166)
Executive Member
2021-2024 Batch

About the Club

The Department of Electronics and Communication Engineering successfully inaugurated all ECE clubs on 30.03.2022. During the academic year 2021 -22, the Robotic club conducted two events.

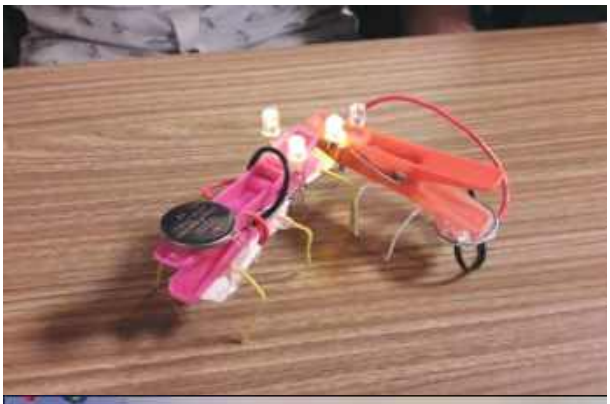
48 Hour Robotic Software Hackathon 2022

It is the first event for the 2nd year & 3rd Year ECE Students in the Winter semester. It helped students to improve their analytical skills, efficiency and accuracy in coding. The student attended the workshop scheduled in System on Chip Laboratory on 4.30 PM @ 05.05.2022 some basic insights of Tinker cad online tools and the participants could develop their own design. E Certificates will be provided for all active participants and prizes were given for first 3 places.

ROBO FEST 2022

It is the second event for the 2nd year, 3rd year & 4th Year ECE Students in the Winter semester. This event comprises of **prelims** with **Robotics Quiz** followed by **second round** for the eligible 5 members to **assemble a mini-Robot** using household items including paper clips, clothes pins wires, 2 batteries, a vibrating motor, and LED lights for the eyes. This event scheduled on 4 PM - 5 PM @ 27.05.2022 at the venue ECE Gallery Hall. The prizes for first, second and third were provided on valedictory function for all the clubs.

Event Photos



Programming Club

The Programming Club in ECE department empowers the students of ECE, competitive in programming skills and contemporary technologies. The club periodically conducts value added courses by which the students will be proficient in different programming platform and complete the programming hackathon in wide international level.

Faculty Coordinators

The faculty coordinators of the Programming Club are as follows:

Mr. Ashwath S

Assistant Professor - ECE

Programming Club Coordinator

Mrs. Muthumari

Assistant Professor - ECE

Programming Club Co-Coordinator

Office Bearers of the Programming Club

S.V.N RUPESH (VTU12782)

SECRETARY

2018-2022 Batch

M NIKHILESWARA SRI VENKAT (VTU15001)

EXECUTIVE MEMBER

2018-2022 Batch

P. ABDUL KALAM (VTU13801)

EXECUTIVE MEMBER

2019-2023 Batch

K. VAMSI KRISHNA (VTU17125)

EXECUTIVE MEMBER

2020-2024 Batch

L. DHANUNJAY (VTU16731)

EXECUTIVE MEMBER

2020-2024 Batch

Coding Contest

MATLAB (an abbreviation of "MATrix LABoratory") is a proprietary multiparadigm programming language and numeric computing environment developed by MathWorks.
It allows matrix manipulations; plotting of functions and data, implementation of algorithms, creation of user interfaces, interfacing with programs written in other languages, including C, C++, Java, and FORTRAN, analyze data, develop algorithms, and create models and applications.
It has numerous built-in commands and math functions that help you in mathematical calculations, generating plots, and performing numerical methods. Moreover, most of the signals processing projects are done with the help of MATLAB. Therefore, learning and practicing MATLAB is a very much needed task for all the students especially the students of Electronics and Communication engineering should master this tool as they have a standalone course called

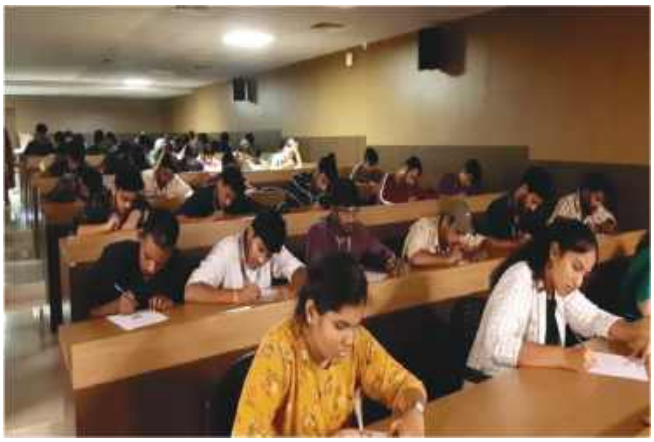
as Signals and Systems Laboratory where MATLAB is the one and only tool to be used to solve all the signal and system related experiments.

This contest is scheduled for only second year students of Electronics and Communication Engineering in a view to spike their interest towards this tool. This contest enhances the student's interest in MATLAB programming.

The contest had two stages; first stage is a prelim where all the students were asked to answer 20 MCQ based questions. A total of 190 students where registered and 160 students attended the prelims. Top 30 participants were selected from the prelims and they were invited to participate in the mains which is a stage 2. The main event consists of 4 problems for which the students have to find the solution through MATLAB. The main contest was conducted through "MATLAB Grader", which is a browser-based authoring environment which can automatically grade student work and provide feedback. The top performed three students were rewarded with winner certificate and prize, whereas the other remaining students were given the participation certificate.

MATLAB coding contest was conducted for 2nd and 3rd year ECE students on 06-05-2022. A total number of 35 interested students participated. The contest was hosted on MATLAB software platform. An Open-Ended problem statement was given for participant, to find a solution and implement the same using MATLAB coding. The contest duration was 4-hours. Top three scorers were awarded with prizes.

Event Photos:



Active Teaching & Learning Methods

Concept Mapping




Technical-Quiz



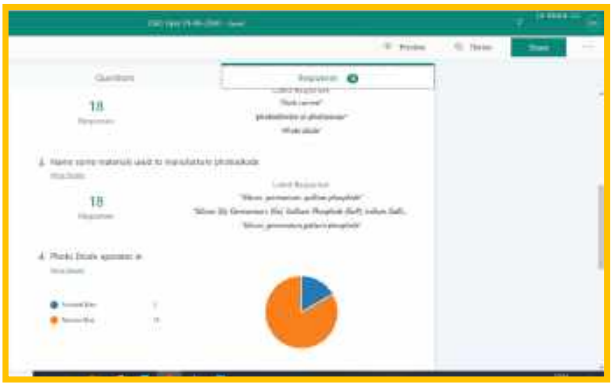



Active Teaching & Learning Methods

Hands-on IoT Design




Online-Live Class Quiz

Active Teaching & Learning Methods

Creative Learning Methodology



Think pair share


Concept Based Learning


2018-2022 Batch Students- Internship

International University

Asritha Manju and Amit Sikder

"Implementation of Graphical User Interface for Controller Design" and "Simulation of a Digital Controller of a Buck Converter"

1. **Vajja Likhitha and Niraj Kumar** "Smart waste management system based on IoT Technology and App development"
2. **Meesala Sai Pramitha and Kasula Rakesh** "An Analysis of Traffic Congestion and Visualization of AVL GPS Data Study in Hajj"
3. **Swapnil Datta** "Future Internet- 5g And Beyond"

Meda Kavya Nikhita

"Signal Processing and Machine Learning Applications for Wearable and Mobile Technologies"

Hasitha Gunnam

"Diagnosis of Autism spectrum disorder in children: Data preprocessing and First Models"

Industry

1	**Students Name :**	N PAVITHRA, U.SUSMITHA
	Project Title :	SMART GROW LIGHTING SYSTEM FOR AGRICULTURE
	Company Name :	LED Chip Indus Pvt Ltd, Hyderabad
2	**Students Name :**	KATTEKOTA CHIKITHA, V.V ENKATA CHAITHANYA
	Project Title :	SMART STREET LIGHT CONTROL AND MAN HOLE MONITORING
	Company Name :	LED Chip Indus Pvt Ltd, Hyderabad
3	**Students Name :**	BOLLINENI VINAY,GANGIREDDY GURU PRAVEEN KUMAR REDDY
	Project Title :	MEASUREMENT OF GAMMA RADIATION WITH DETECTOR
	Company Name :	Nucleonix Systems Pvt Ltd, Hyderabad
4	**Students Name :**	KUMMARI NIKHIL, SANTOSH KUMAR YARABATI,RAM DINESH REDDY
	Project Title :	SMART BATTERY SWAPPING STATION
	Company Name :	VOLTME MOTORS, Hyderabad
5	**Students Name :**	A. TEJASWINI, REETHIK RAO, K. AISWARYA RAO
	Project Title :	Autonomous Electric Vehicle
	Company Name :	VOLTME MOTORS, Hyderabad
6	**Students Name :**	CHILLANGI CHAITANYA KUMAR, SALLA VARDHAN,G. LALITH SAI
	Project Title :	UNIVERSAL CHARGING INFRASTRUCTURE DESIGN AND DEVELOPMENT FOR TWO WHEELER ELECTRIC VEHICLES
	Company Name :	VOLTME MOTORS, Hyderabad
7	**Students Name :**	AMARA SRI SAI GANESH,RAJNIKANT KUSHWAHA
	Project Title :	Alpha Scintillation monitor
	Company Name :	NucleonixSystems Pvt Ltd, Hyderabad
8	**Students Name :**	P .HEMANVITHA, A .SPARSHA
	Project Title :	DESIGN AND SIMULATION OF A SIMPLE VOTING MACHINE USING VERILOG HDL
	Company Name :	ECIL, Hyderabad

2018-2022 Batch Students- Placement

No of Students **Placed**

599

2018-2022 Batch Students- Placement

2018-2022 Batch Students- Placement

2018-2022 Batch Students- Placement

2018-2022 Batch Students- Placement

2018-2022 Batch Students- Placement

Cognizant placed Students

Capgemini placed Students

2018-2022 Batch Students- Placement

DXC placed Students

Wipro placed Students

2018-2022 Batch Students- Founders Foreign studies Scholarship

2018-2022 Batch Students- Pursuing Higher Education (International Universities)

Marredy Gayatri

Chennupati Abhinav and Yakasiri Jeevan Sreeram Reddy

Gireesh Chaitanya Kota

Kalapala Lakshmi Priya

Nithish Kumar K and C. A. Sai Choudary

M.Siva Dharma Sastha

Gaddam Venkatesh

Vissarapu Sumanth

IP Veerayya Chowdary and VV Reddy Madireddy

C.Jameela mani

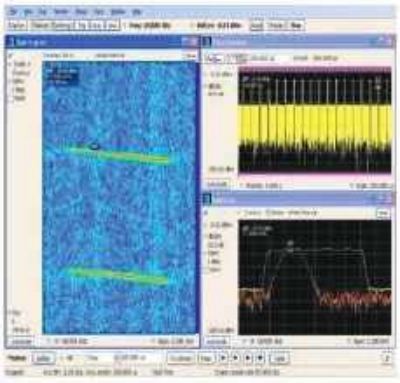
Saam Prasanth Dheeraj

Rakesh Vanacherla

Cutting Edge Technologies Offered (2021 – 22)

Communication Lab

NI USRP-292x transceivers provide relevant, hands-on laboratory learning in RF and communications as an affordable teaching solution. The NI USRP hardware and LabVIEW software combination offer students a unique and relevant opportunity to experiment with a wide range of real-world signals in introductory communications and digital communications laboratories. With this solution, students can focus on the practical implementation of theoretical algorithms and real-world impairments earlier in the curriculum.

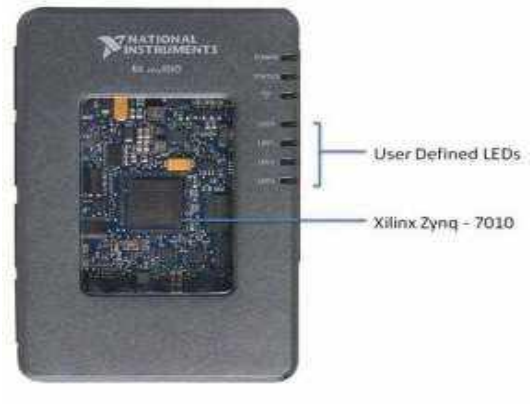


SignalVu-PC is the foundation of RF and vector signal analysis software that helps you easily validate RF designs. It is based on the signal analysis engine of the RSA5000 Series real-time signal analyzers and runs on your computer or Windows tablet. You can now move your analysis of acquisitions off the instrument and anywhere. SignalVu-PC is also the companion software that runs the analysis for the Tektronix USB real-time spectrum analyzers. Whether your design validation needs include wideband radar, high data rate satellite links, wireless LAN or frequency hopping communications, the SignalVu-PC comprehensive suite of tools and application software can speed your time-to-insight by showing you the time-variant behavior of these signals.

Ansys HFSS is a 3D electromagnetic (EM) simulation software for designing and simulating high-frequency electronic products such as antennas, antenna arrays, RF or microwave components, high-speed interconnects, filters, connectors, IC packages and printed circuit boards.

Cutting Edge Technologies Offered (2021 – 22)

Embedded Systems and Robotics Lab



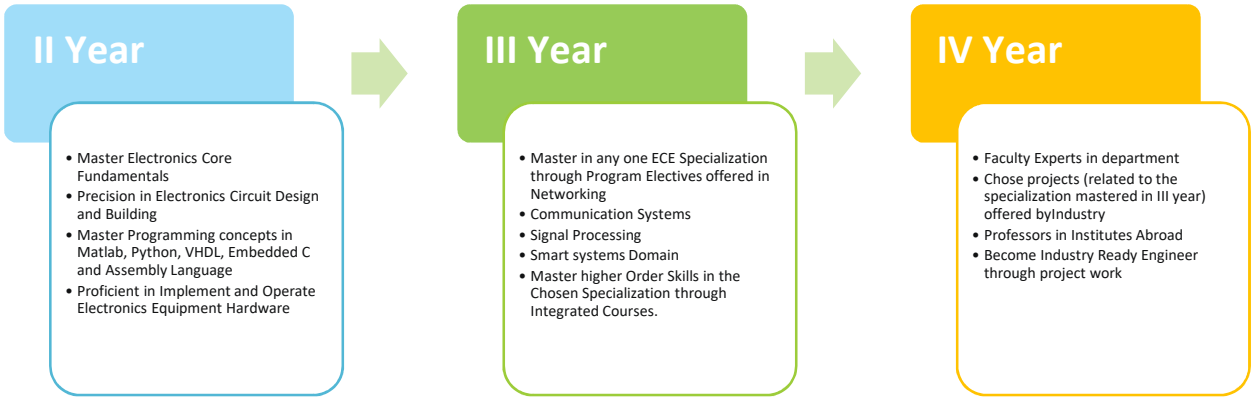
NI myRIO is a revolutionary hardware/software platform that gives students the ability to "do engineering" and design real systems more quickly than ever before. Complete with the latest Zynq integrated system-on-a-chip (SoC) technology from Xilinx, the NI myRIO boasts a dual-core ARM® Cortex™-A9 processor and an FPGA with 28,000 programmable logic cells, 10 analog inputs, 6 analog outputs, audio I/O channels, and up to 40 lines of digital input/output (DIO). Designed and priced for the academic user, NI myRIO also includes onboard WiFi, a three-axis accelerometer, and several programmable LEDs in a durable, enclosed form factor.

The students will learn to use the **Pitsco TETRIX PRIME®** building system and myRIO to construct and automate three model robots that complete basic to advanced tasks. For each robot, students build the physical assembly, connect sensors and actuators, run programs in LabVIEW, and learn the high-level controls theory that applies to the robot's function. Students are encouraged to apply their creativity and the skills they learn to develop additional functionality for the model robots, and create new robot designs on their own.

Signal Processing Lab

Vel Tech Rangarajan Dr. Sagunthala R&D Institute of Science and Technology now offers a Campus-Wide License to MATLAB, Simulink, and companion products. All faculty, researchers, and students are eligible to download and install these products on their college computers as well as their personally-owned computers. They can use the latest versions of MATLAB and Simulink and other MathWorks products to support the course work and research.

Roadmap to Get Dream/Core Job in Electronics and Communication Engineering Field



Skills Imparted Through Program Elective

Embedded Systems Domain	VLSI Design Domain	Signal Processing Domain	Communication Domain	Networking Domain
• ECS and PCB Design • Virtual Instrumentation • RTOS • Embedded System and Robotics • Embedded C Programming	• Reconfigurable Computing with FPGA • Physical Design of CMOS • SoC • Analog VLSI Design	• Basics of Python Programming • Professional Python Programming • Digital Image Processing • Fundamentals of Machine Learning • Machine Learning	• Antenna Design Techniques • EMI/EMC • MIMO Wireless Communication • SDR	• IoT • Wireless Ad-hoc and Sensor Networks • SDN • Cognitive Radio Networks

EDITORIAL BOARD

FACULTY TEAM

Dr. V. Jaya Sankar
Dean SoEC

Dr. P. Esther Rani
HOD ECE

Dr. D.David Neels Ponkumar
Professor

Dr. Sathya Sri B
Associate Professor

STUDENT TEAM

Syed Imran Basha
(VTU11587)
8th semester

Surya S
(VTU11569)
6th semester

K Neeli Madhav Reddy
(VTU18321)
4th semester

Vel Tech

Rangarajan Dr. Sagunthala

R&D Institute of Science and Technology

(Deemed to be University Estd. u/s 3 of UGC Act, 1956)

ANNUAL REPORT 2021-22

No.42, Avadi - Vel Tech Road, Vel Nagar, Avadi, Chennai - 600 062

www.veltech.edu.in

1800 212 7669