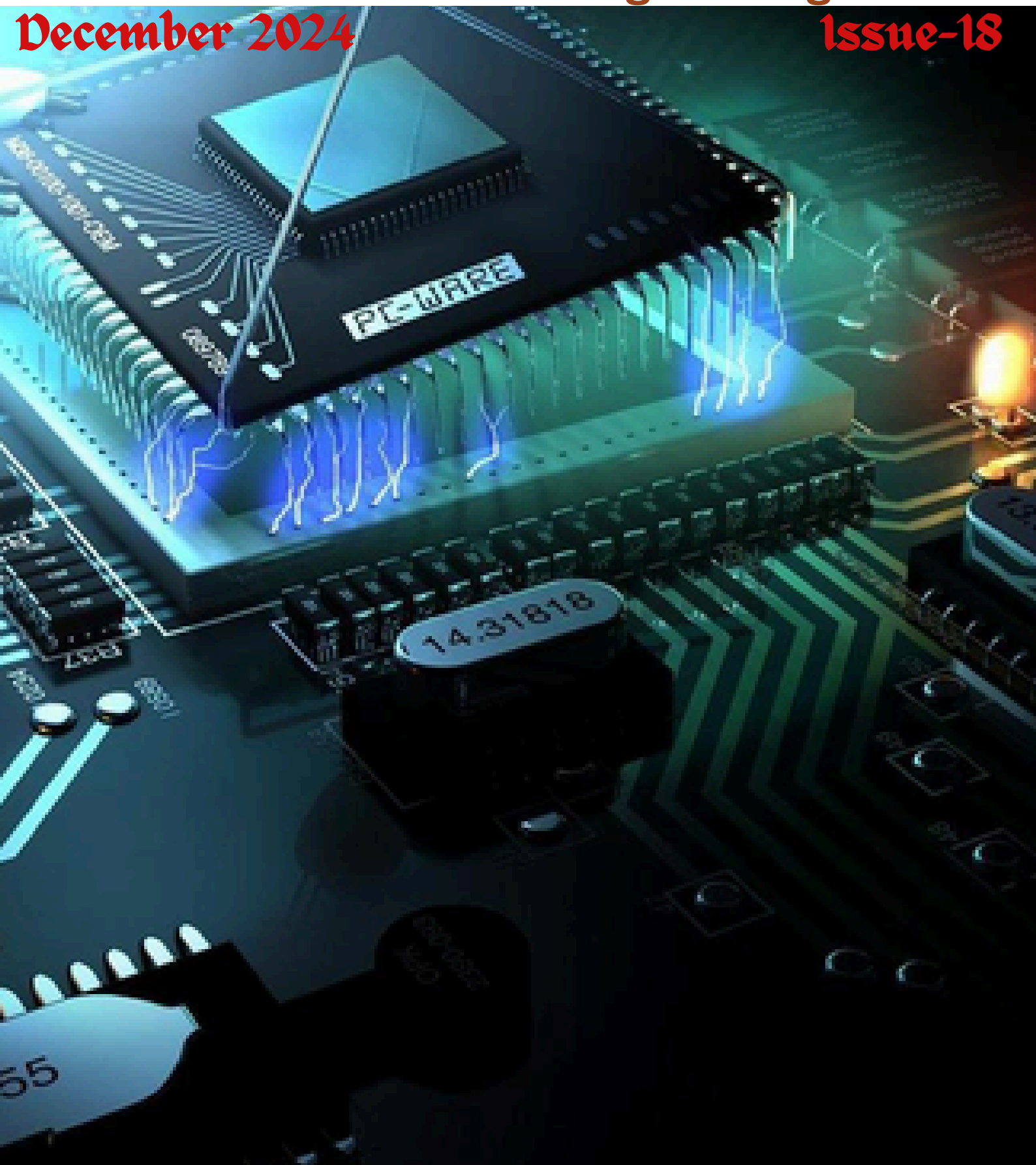
Centre Line Communication

A Half-Yearly NewsLetter Published by the Department of Electronics and Communications, Department of Electronics & Communication Engineering

December 2024 **Issue-18**



Shri Vishnu Engineering College for Women
(Autonomous)
Vishnupur, Bhimavaram, Andhra Pradesh
ESTD : 2001

Vision

"To become leading centre of learning that incorporates the academic excellence and latest trends in research to make a significant contribution to the society in the field of Electronics and Communication Engineering."

Mission

- To educate and empower the women students with state of art knowledge and latest trends in electronics and communication engineering to meet the growing real-world challenges..
- To provide training to the students that bridges the gap between industry and academia.
- To inculcate professional ethics and morals among the students.
- To inspire the students to use technology for societal issues.
- To nurture engineers with a focus on sustainable development, advanced technical skills, and entrepreneurial innovation.

PEOs

PEO 1: Graduates will have the ability to apply the principles of Electronics and Communication Engineering that provides solutions for real world problems.

PEO 2: Graduates will be capable of contributing to the advancement of sustainable development and innovation.

PEO 3: Graduates will have professional ethics and morals to formulate and solve engineering problems that serve the society.

PEO 4: Graduates will have the zeal and motivation to get involved in life long learning process to become innovators and dynamic leaders.

STUDENT ACHIEVEMENTS

The Vishnu Tech Warriors team Dr. M. V. Subbarao, Dr. D. Ramesh Varma, Dr. G. Challa Ram of ECE department and Ms. V. Susmitha of III ECE, achieved a remarkable milestone by securing the Third Prize at the prestigious 5G & 6G Hackathon 2024 for the project titled "Advancing Predictive Maintenance in the Automotive Industry with Edge AI," held at IIIT Hyderabad organized by the department of Telecommunications (DoT), Government of India.

The Vishnu Space Application Center (VSAC) is proud to announce a remarkable achievement by its students. A cohort of 24 aspiring individuals from ECE of VSAC has successfully cleared the prestigious ASOC (Amateur Station Operator's Certificate) License Examination, conducted by the Ministry of Communications, Department of Telecommunications, Wireless Monitoring Station, WPC, Vijayawada on October 4, 2024.

Yesilanka Veera Sai (23B01A04D2) and Pindi Nithya Dharani (23B01A0496) of II ECE department selected as one of the Top 75 women engineering students in the prestigious Women in Tech Program (Batch III) by NXP. This selection highlights their exceptional talent, dedication, and potential in the field of technology.

G. Loshmi
7.5 LPA
21B01A0419,ECE

M.keerthana
7.5 LPA
21B01A0464, ECE

G. N.S. MAHITHA,13
LPA 20B01A0443, ECE

Garaga Sai Lakshmi
7.5 LPA
22B05A0403, ECE

Leharika Sri
7.5 LPA
21B01A0411, ECE

CH.ARUNA DEVI ,7 LPA
20B01A0427, ECE

Internship

U.L.S.RANI
50000 PM
Flipkart
21B01A04B1,ECE

P.JASWINI
50000 PM
21B01A0486,ECE

G.J.SREE PRIYA
35000 PM
21B01A0426,ECE

Faculty Achievements

Dr. K. Padmavasavi, Head of the Department of ECE delivered an insightful talk on the HAM activities conducted by the ECE department during the HAM Radio Tech Meet held in Vijayawada. She was honoured by the HAM Community of India for her valuable contributions and efforts in promoting HAM radio activities.

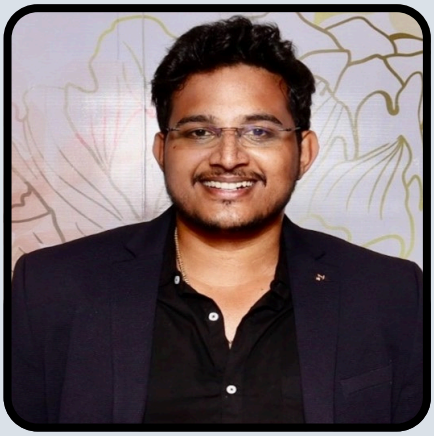
Dr. D Ramesh Varma, Assistant Professor in the Department of Electronics and Communication Engineering, has obtained his Ph.D. with a focus on 'Textile Antennas for BANs'.

Title of Research work: Design of Textile Antennas for Wireless Body Area Networks and Biomedical Applications.

Supervisor name: Dr. M Murali., Professor, Department of Electronics and Communication Engineering Centurion University of Technology and Management, Andhra Pradesh.

University: Centurion University of Technology and Management, Andhra Pradesh.

Month & Year of awarding PhD : April 2024



Dr. G. Challa Ram, Assistant Professor in the Department of Electronics and Communication Engineering, has obtained his Ph.D. with a focus on 'Graphene based Terahertz circuits'.

Title of Research work: Investigations on Surface Plasmon Polaritons based Filters and Sensors.

Supervisor name: Dr. Yuvaraj S., Assistant Professor, Department of Electronics and Communication Engineering, National Institute of Technology, Andhra Pradesh

University: National Institute of Technology, Andhra Pradesh. (NIT-AP)

Month & Year of awarding PhD : Aug 2024.

Dr. M. V. Subbarao, Dr. D. Ramesh Varma, and Dr. G. Challa Ram from the Department of Electronics and Communication Engineering participated in the Aspire Startup Event held as part of the India Mobile Congress (IMC) 2024, recognized as Asia's largest technology festival. The event took place at Bharat Mandapam, New Delhi, and served as a prominent platform for innovators, researchers, startups, and industry experts to showcase innovative technological ideas and solutions.

During the event, the team presented their innovative idea, which demonstrated significant potential in the field of communication and emerging technologies. Their concept attracted appreciation from the expert panel and industry representatives for its originality, practical relevance, and technological impact.

In recognition of their outstanding innovation and presentation, the team was honored with the prestigious "Best Idea Award." As part of this achievement, they received a cash prize of ₹50,000/-. The award was presented by Dr. Chandra Sekhar Pemmasani, Honorable Minister of State for Communications, Government of India.

This accomplishment reflects the commitment of the ECE department faculty towards research, innovation, and startup-driven technological development.

PATENTS

Dr. K. Padma Vasavi, Dr. M. Prema Kumar, Dr. S. Hanumantha Rao, Dr. M. Pradeep, Mr. S. Sreenivasu, Mrs. B. Padma, Dr. A. Sri Krishna and, Dr. G. Durga Prasad of ECE, IT & AI departments in collaboration Published a Patent with the title of invention as "Adaptive Real-Time Embedded System for IoT-Based Communication Networks Using Dynamic Signal Processing.
Patent Application Number: 202441075515
Date of filing: 05/10/24
Date of Publication: 18/10/2024

Dr. K. Padamavasavi, Dr. M. V. Ganeswara Rao, Dr. M. V. Subba Rao, Dr. G. Challa Ram of ECE Published a Patent with the title of invention as "POWER-EFFICIENT EMBEDDED CONTROLLERFOR REAL-TIME MEDICAL MONITORINGDEVICES.
Patent Application Number: 202441069691
Date of filing: 14/09/24
Date of Publication: 20/09/2024

Dr. M. Pradeep, Dr. K. Padma Vasavi, Dr. S. Hanumantha Rao, Dr. M. Prema Kumar, Mr. K. Dilip Kumar, Mr V Satyanarayana Murthy, Mrs T Madhavi and Mr N Praveen Kumar of ECE, EEE and AIML Departments in collaboration Published a Patent with the title of invention as "Computer Vision Application: Vehicle Counting and Classification System from Real time Videos.
Patent Application Number:202441087666
Date of filing: 14/09/24
Date of Publication: 22/11/2024

Dr. D Ramesh Varma, M V Subbarao, Dr. G Challa Ram, Mr. D Girish Kumar, Dr G Durga Prasad ECE and, AIML Departments in collaboration Published a Patent with the title of invention as "Textile based Antenna for Non-Invasive Monitoring of Tissue Properties in Biomedical Applications.
Patent Application Number: 202441084898
Date of filing: 06/11/24
Date of Publication: 15/11/2024

Faculty Publications

Dr. M. Prema Kumar of ECE Department published a paper titled "Remote Sensing–Based UAV Imaging in Heat Pattern Analysis Impact on Climate Change Detection Using Fuzzy Stacked Lasso Elastic-Net Model".in the journal of Remote Sens Earth Syst Sci 7, 699–708 during November (2024).

Dr. G. ChallaRam, D. Girish Kumar, Dr. D. Ramesh Varma, Dr. K. Padmavasavi and, Dr. S. Hanumanta Rao. of ECE Department published a paper titled "GRAPHENE BASED THZ FILTER DESIGN USING OPEN-LOOP RESONATOR FOR SPACE APPLICATIONS" in the Journal of Diamond & Related Materials During December 2024.

Dr. N. K. Jaiswal, K. H. Krishna, M. V. Ganeswara Rao, and Dr. M. Sumalatha , of ECE Department published a paper titled "Figures of Merit in High Frequency GaN-Based Parallel Split Gate Trench Power MOSFET Device," 2024 IEEE Third International Conference on Power Electronics, Intelligent Control and Energy Systems (ICPEICES), Delhi, India, during November 2024. Conference series.

Dr. M. Sumalatha of ECE Department published a paper titled "HEAT-RESISTANT THIN OPTICAL FIBER FOR SENSING IN ENVIRONMENTS WITH HIGH TEMPERATURES" in the African Journal of Biomedical Research During October 2024.

Dr. M. Sumalatha of ECE Department published a paper titled "EMPATHIZING PARKINSON'S DISEASE USING SUPERVISED LEARNING METHODS" in the Journal of Theoretical and Applied Information Technology During November 2024.

Dr. P. RAVI KUMAR, of ECE Department published a paper titled, "YOLO ALTERNATES GROUNDED GARBAGE TAXONOMY AND REPROCESSING ASSISTANT", in the Journal of Theoretical and Applied Information Technology. Vol.102. No. 18, ISSN: 1992-8645 during October 2024.

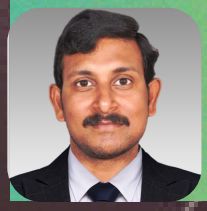
Dr. Padmavasavi Kalluru, of ECE Department published a paper titled "Spectral efficiency enhancement and energy optimization in 5G networks via stochastic optimization-inspired by modified slime mould algorithm" in International Journal of Information Technology during October 2024.

Dr. M. V. Subbarao of ECE Department published a paper titled "TRANSFORMER-BASED ADAPTIVE 3D RESIDUAL CNN WITH SPARSE REPRESENTATION FOR PAN-SHARPENING OF MULTISPECTRAL IMAGES" in the International Journal of Remote Sensing During October 2024.

Dr. G. ChallaRam of ECE Department published a paper titled "AN EFFICIENT AND MINIATURIZED ULTRA-THIN TUNABLE UWB GRAPHENE META SURFACE ABSORBER FOR TERAHERTZ GAP REGIME" in the Journal of Current Applied Physics During October 2024.

Dr. G. ChallaRam, Dr. M.V. Subba Rao, Dr. D. Ramesh Varma, Dr. M. Prema Kumar of ECE Department published a paper titled "NOVEL MICROWAVE SENSOR FOR ENHANCED BIOCHEMICAL DETECTION AND PREDICTION THROUGH MACHINE LEARNING FOR INDUSTRIAL APPLICATIONS" in the Journal of Proceedings on Engineering Sciences During October 2024.

Dr. Dr. G R L V N S Raju of ECE department Presented and published a paper entitled "Design of RFID based smart rationing system." In API Conference proceedings the month of July 2024.



Dr. M Pradeep of ECE department Presented a paper entitled "Harnessing Ambient Energy for IoT: Improvements in Path Tools for Drive Collecting Structures" E3S Web of Conferences, 1st International Conference on Power and Energy Systems (ICPES 2023)

Dr. S. Hanumanta Rao. of ECE Department published a paper titled "ENHANCING SMART GRID MANAGEMENT: LOAD FORECASTING, POWER GRID STABILITY ASSESSMENT, AND FAULT DETECTION USING ARTIFICIAL NEURAL NETWORKS" in the 10th International Conference on Advanced Computing and Communication Systems (ICACCS) During October 2024.

Dr. M. Sumalatha, Dr. M. V. Ganeswara Rao of ECE Department published a paper titled "Efficient Data Comparison through Multiplexer Logic for Low Power and Low Area," 2024 OPJU International Technology Conference (OTCON) on Smart Computing for Innovation and Advancement in Industry 4.0, Raigarh, India, during October 2024. Conference series.

P. Ravikumar, M. V. Ganeswara Rao of ECE Department published a paper titled "Verilog Based Automated Retail System," 2024 OPJU International Technology Conference (OTCON) on Smart Computing for Innovation and Advancement in Industry 4.0, Raigarh, India, 2024. Conference series.

Dr. M. V. Ganeswara Rao, Dr. M. Sumalatha, K. H. Krishna, Dr. N. Jaiswai, Dr. P. Ravi Kumar, of ECE Department published a paper titled “Design and development of FPGA Architecture for Low-Power UART for Smart Homes," 2024 OPJU International Technology Conference (OTCON) on Smart Computing for Innovation and Advancement in Industry 4.0, Raigarh, India, during October 2024. Conference series.

D. Girish Kumar, Dr.M. Venkata Subbarao, Dr. D. Ramesh varma, Dr. G. Challa Ram, of ECE Department published a paper titled “Deep Learning Approach to Rice Varietal Identification," 2024 International Conference on Data Science and Network Security (ICDSNS), Tiptur, India, October 2024. Conference series.

Ms. Hemalatha, M and Pavani. T, of ECE Department published a paper titled “HIGH-SPEED AND AREA-EFFICIENT APPROXIMATE MULTIPLIER USING TRUNCATION TECHNIQUE” in the 2024 OPJU International Technology Conference on Smart Computing for Innovation and Advancement in Industry 4.0, OTCON 2024During October 2024. Conference series.

Dr. M. Pradeep of ECE Department Presented a published titled "An IoT Based Greenhouse Remote Monitoring System for Automation of Supervision for Optimal Plant Growth," 2024 10th International Conference on Advanced Computing and Communication Systems (ICACCS), Coimbatore, India, November 2024. Conference series.

STUDENT ACTIVITIES

EXPERT TALK

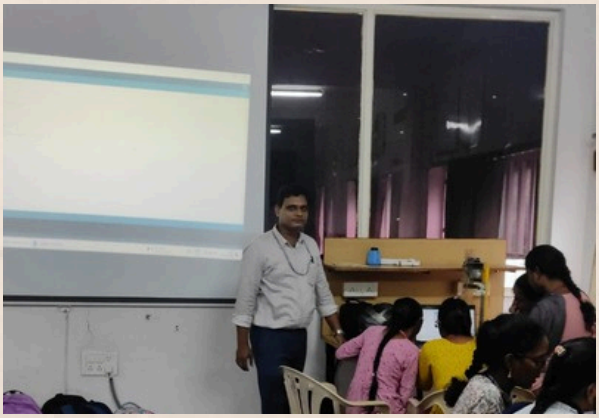
Department of ECE conducted an Expert Talk on 23 November 2024 on "ENTREPRENEURSHIP AND INNOVATION AS A CAREER OPPORTUNITY" Resource Person for the lecture was Dr. G. Challa Ram, Faculty of Dept. of ECE.

STUDENT DEVELOPMENT PROGRAM

Department of ECE conducted an Expert Talk on 30th November 2024 on "MASTERING EMBEDDED SYSTEMS: PROTOCOLS, C INTERNALS, AND TECHNICAL PROJECTS FOR INNOVATION AND CAREER SUCCESS" Resource Person for the lecture was Mr. E. Saikumar, Scientist- D at DRDO and Former Senior Engineer at Bosch Global Software Technologies, R&D Engineer at Medha Servo Drives PVT. Ltd.

STUDENT DEVELOPMENT PROGRAM

Department of ECE conducted a Peer Enabled Student Development Program during 14th to 23rd November 2024 with title “ARDUINOBLITZ -FROM BASICS TO BRILLIANCE. Convenor Dr. K. Padmavasavi HoD, facilitators were Mr. E. R. Praveen Kumar, Mr. K. Murthy Raju & Mr. K. Hari Krishna Faculty of Dept. of ECE.



EXPERT TALK

Department of ECE conducted an Expert Talk on 27 November 2024 on “THE EVOLUTION OF HAM RADIO: INNOVATION FOR THE NEXT GENERATION.” Resource Person was Mr. A. Ramesh Babu, a National HAM radio trainer from the Academy of HAM Radio.

STUDENT DEVELOPMENT PROGRAM

Department of ECE conducted a Student Development Program during 11th to 16th November 2024 Titled “A 6 DAY WORKSHOP ON RTL TO GDS FLOW CHIPS TO STARTUP INITIATIVE.” facilitators were Dr. M. V. Ganeswara Rao, Dr. M. Sumalatha, Mr. K. Hari Krishna, Ms. M. Hemalatha, Mrs. K. Ajitha Lakshmi, and Mrs. B.Vaisalini faculty of Dept. of ECE.

ATL DAY

International Day of Person with Disabilities (IDPD 2024)

This year marked the 14th consecutive celebration of the International Day of Persons with Disabilities at SVECW. The event kicked off with an open house in the morning, where students from the Assistive Technology Lab proudly showcased their innovative projects. These projects drew enthusiastic visits from students across all departments, who expressed admiration and appreciation for the creative solutions and advancements in assistive technology.

The event highlighted the collective commitment to inclusivity and the incredible efforts of students in developing technologies that aid persons with disabilities. It was a day filled with inspiration, learning, and a celebration of the brilliant minds dedicated to making a positive impact in the field of assistive technology.

In the afternoon session of the celebration, there was a heartfelt distribution of E-Sticks and Learning Aids to the Centre for Visually Challenged in Bhimavaram. The benevolent management of Shri Vishnu Engineering College for Women (SVECW) also distributed an E-Trike to Ms. Rajeswari.

During the event, Dr. G. Srinivasa Rao, the Principal, addressed the students, emphasizing the importance of innovation and entrepreneurship. He shared the deep satisfaction that comes from observing the International Day of Persons with Disabilities (IDPD).

Dr. UV Ramana Raju garu, the chief guest, reminisced about his relationship and bonding with ATL SVECW and lauded their efforts in creating products that assist disabled individuals. The event was further graced by the presence of Dr. P. Venkata Rama Raju, Vice Principal SVECW, and Dr. Padma Vasavi, Dean ATL, who also expressed their support and appreciation for the initiatives.

Editorial Board

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V. V. Suvarna 21B01A04B4