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

Academic Year 2022-23 | July 2022 to December 2022

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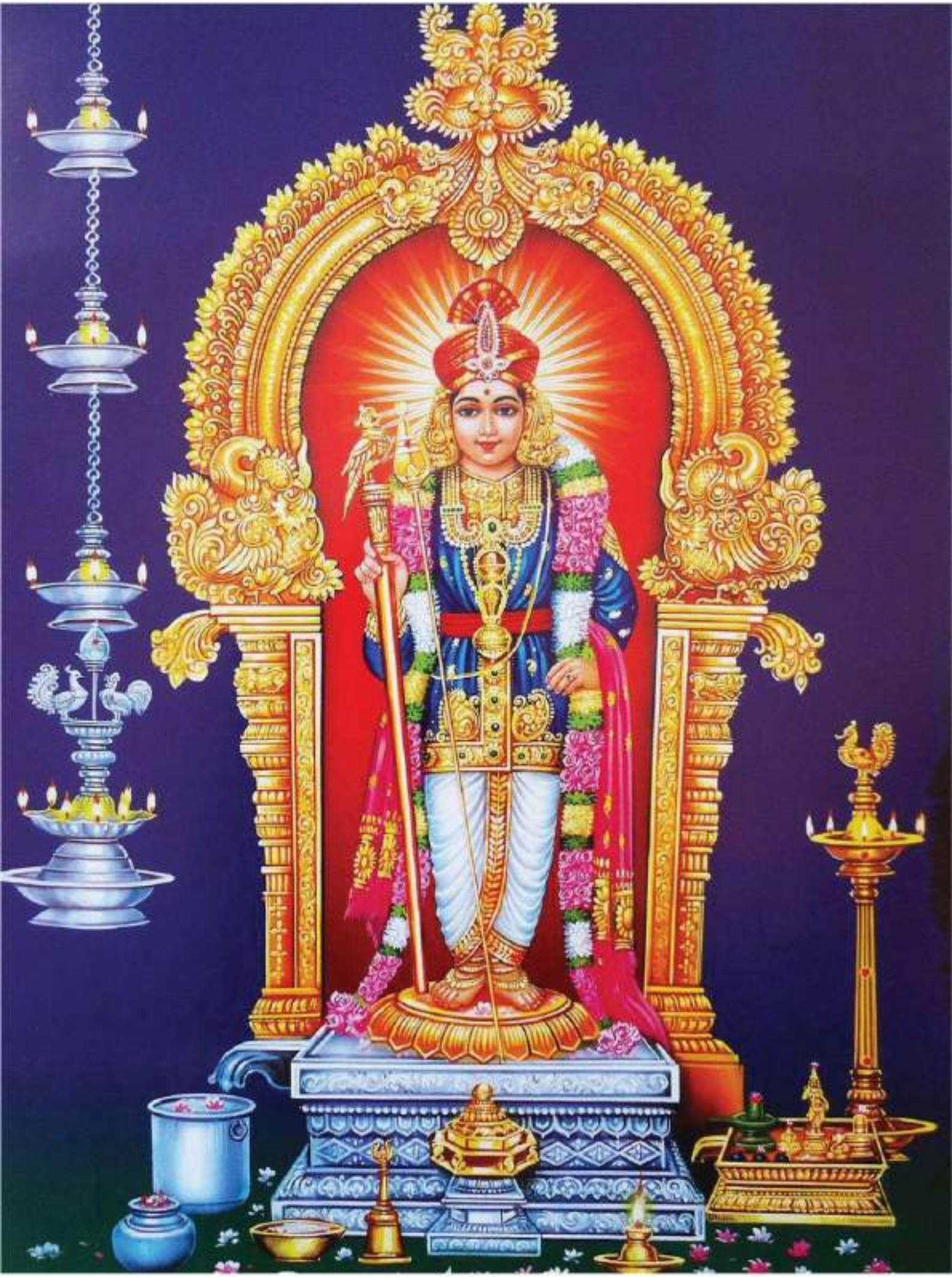
News Bite



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Message

In this issue of NEWS BITE, students and faculty are provided with an opportunity to showcase their achievements and stay updated on departmental activities, including technical, cultural, and co-curricular events conducted both within and outside the institution. The newsletter highlights initiatives aimed at knowledge enrichment, skill development, career guidance, and industry exposure, including an AICTE-sponsored ATAL FDP on “Artificial Intelligence Driven 5G/6G Networks” and an IEEE-sponsored FDP on “Computational Intelligence – Algorithms and Implementation,” which benefited 43 participants. Various technical events were organized through professional bodies like IEEE, along with active student participation in ACE, Robotics, Programming, and EWB club activities such as coding contests, robotics challenges, quizzes, poster presentations, and Tech-Talk sessions. Faculty achievements include funded projects and multiple patent publications in emerging technologies, while students have gained valuable exposure through internships at organizations such as DRDO, CVRDE, and international universities in Canada and Taiwan. The department has also achieved an excellent placement record, with more than 315 students placed in reputed companies like TCS, Cognizant, Accenture.

Prof. Dr. V. Jaya Shankar
Dean - SoEC

Vision of the Department:

To be a centre of academic excellence through quality education and cutting-edge research in the diversified fields of electronics and communication engineering to meet the global challenges and produce high quality professionals.

Mission of the Department:

M1. To enrich the knowledge of graduate engineers for global requirements by promoting quality education through innovative pedagogical practices.

M2. To create an ambience of academic excellence by engaging in cutting-edge research and undertaking collaborative projects with academia and industry.

M3. To develop competence by inculcating human and moral values with leadership and professional skills.

Programme Educational Objectives:

PEO1. Our graduates will have in depth knowledge in mathematical and engineering concepts required to solve engineering problems in the analysis and design of Electronics and Communication Devices and Systems.

PEO2. Our graduates will have the expertise to conceive, design, implement and operate the Engineering products for the societal and environmental problems.

PEO3. Our graduates will have adequate technical skills and leadership qualities in the development of innovative solutions required in core and allied industries.

PEO4. Our graduates will adapt to multidisciplinary environment using evolving technologies and achieve professional competence through higher education, research and lifelong learning.

PEO5. Our graduates will communicate effectively, practice and promote ethical,environmental, health and safety standards in their profession.

Department Highlights

- The department offers a variety of platforms for the students to take part in numerous technical festivals, sporting competitions, and cultural events.

ATAL FDP on " Artificial Intelligence Driven 5G/6G Networks"
21.11.2022 to 02.12.2022

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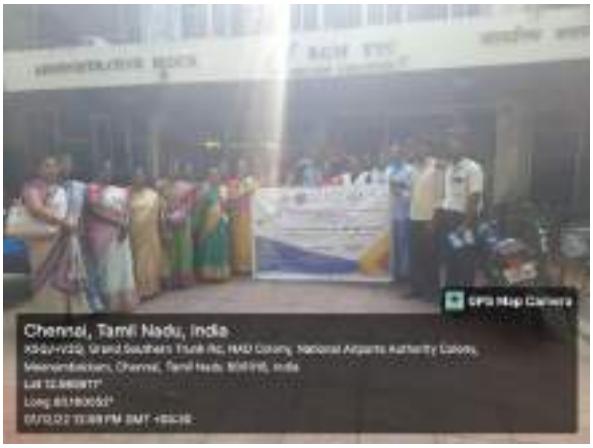

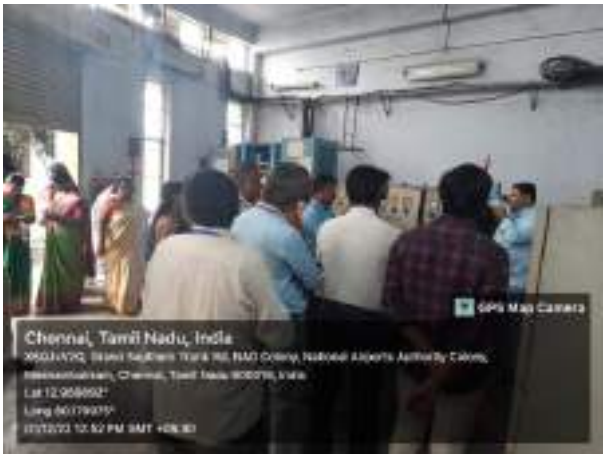

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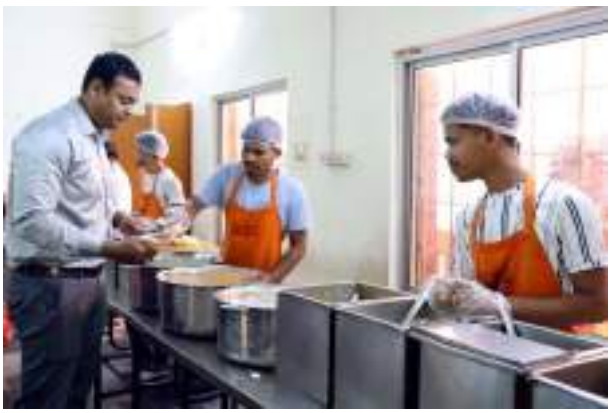


Department Highlights

ATAL FDP on " Artificial Intelligence Driven 5G/6G Networks"
21.11.2022 to 02.12.2022

An **ATAL Faculty Development Program (FDP)** on **"Artificial Intelligence Driven 5G/6G Networks"** was conducted from **21 November 2022 to 02 December 2022** with the objective of enhancing the knowledge of faculty members and researchers in emerging communication technologies. The program focused on the integration of **Artificial Intelligence (AI) techniques with next-generation wireless communication networks**, particularly 5G and upcoming 6G technologies.

The FDP featured a series of expert lectures delivered by distinguished academicians and industry professionals who shared their insights on the **latest advancements in intelligent communication systems**. The sessions highlighted how AI and machine learning techniques can improve network efficiency, spectrum management, resource allocation, and data processing in modern wireless networks.

Participants were introduced to the **fundamental concepts of 5G and 6G network architecture**, intelligent network optimization, and AI-based solutions for communication challenges. The program also discussed emerging applications such as **smart cities, autonomous systems, Internet of Things (IoT), and advanced wireless connectivity**, which rely heavily on high-speed and intelligent communication networks.

The FDP provided an excellent platform for participants to **gain updated knowledge, interact with experts, and explore research opportunities in AI-driven communication technologies**. Overall, the program helped strengthen the participants' understanding of modern wireless networks and encouraged them to integrate these advanced technologies into their teaching, research, and innovative projects.

Student Achievements

- The department offers a variety of platforms for the students to take part in numerous technical festivals, sporting competitions, and cultural events. Our students took part in the following events and brought honour to our department.
- Akash Pasala has won a third prize in the event Circuit Debugging at National Level Technical Symposium conducted by S.A. Engineering College.
- R. Venkat has participated in Project Display at National Level Technical Symposium conducted by S.A. Engineering College.

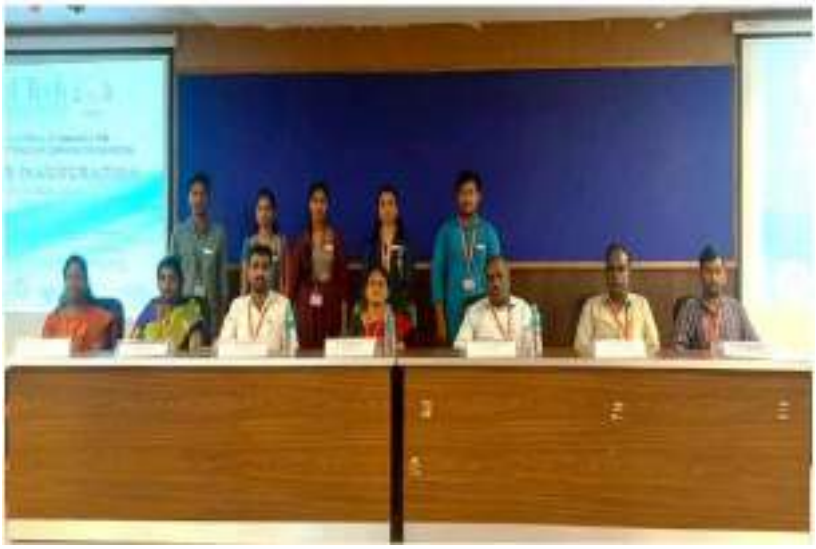
Faculty Achievements

- Dr. Selwin Mich Priyadharson.A has received a funded project "Artificial Intelligence and Remote Sensing Applications in Soil and Crop Management" of Rs 21,30,824 lakhs from ISRO.
- Dr. V. Koushick has published two patent with title "An IOT and Machine Learning based method of communicating a Digital Message with an Information Signal" , "Method to Transfer Electronic Medical Information in Secure Cloud Environment using Blockchain".
- Dr.G.Sasikala has published a patent with title "The present discovery relates to a robust dataset for RF MEMS switch dimensions prediction using feed forward and back propagation neural network".
- Mr. K.Sambath Kumar and Dr. B. Venkataramanaiah has published a patent with title "Real Time Virtual Heart Doctor (RT Vh-doctor) System".
- Dr. M. Anandan has published a patent with title "Mobile Streaming based Intelligent Broadcasting promotion Digital board for Marketing purposes".Dr. Dasari Naga Vinod has published a patent with title "Cloud-Based Automated 3D- Lung Cancer Segmentation and Detection Model".
- Dr.T.Kavitha has published a patent with title " The present disclosure relates to a study UWB micro strip fed 4 element MIMO Antenna for 5G Applications".

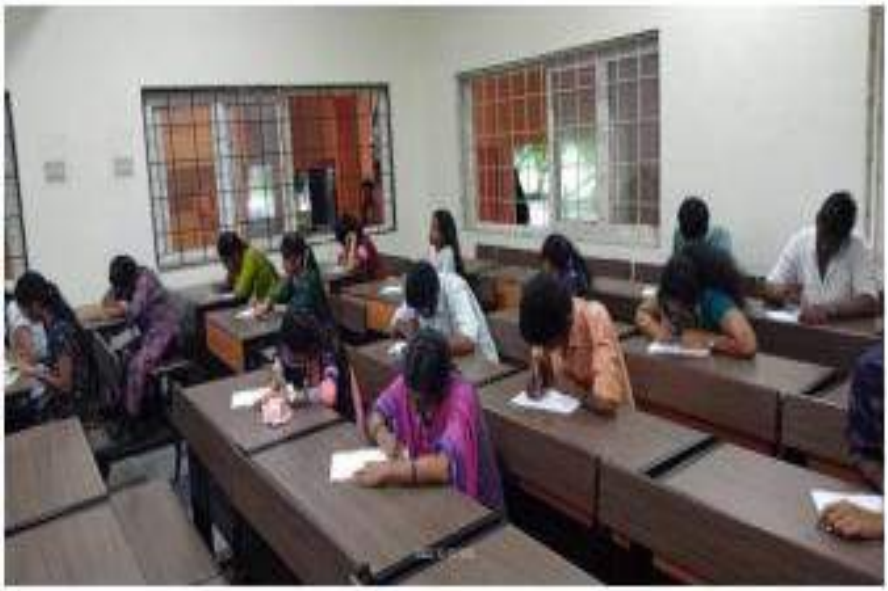
Club Activities

The department have four technical clubs namely Advanced Communication Engineering club (ACE), Robotics club, Programming club, EWB club in which students are encouraged to participate in various technical events. The events conducted by the technical clubs listed below.

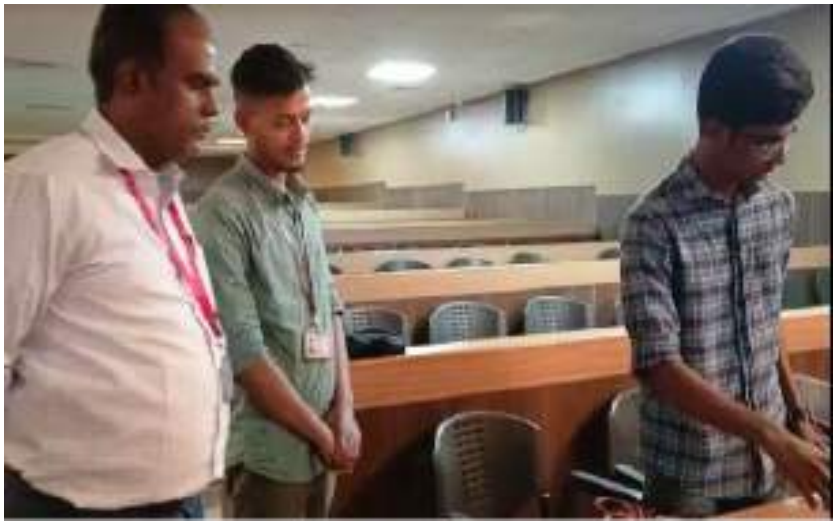
ACE CLUB



- **ACE Club** conducted a event **"Non – Technical Quiz"** with prelims on 12 October 2022 with 148 participants and mains on 23 November 2022 with 48 participants. The event was conducted to student community, so with the questions based on Governance, Social, Recent Trends, Sports and History.

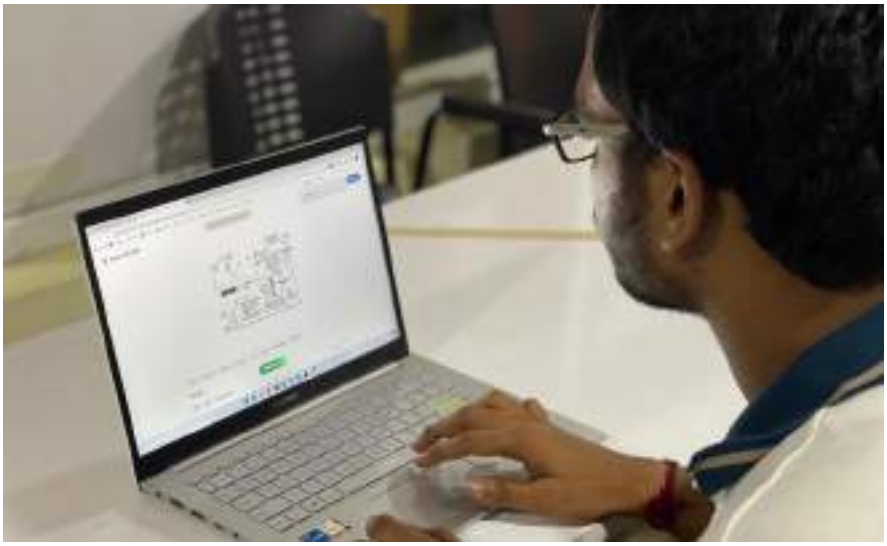


ROBOTICS CLUB



- **ROBOTICS Club** conducted an event titled **"ROBOTIX 2022"** on 01-11-2020 for all undergraduate students of the Summer Semester. The event featured a one-hour robotic design challenge, where students actively participated in designing and presenting innovative robotic models. Two outstanding robotic projects titled "Line Follower Robot**"** and "Smart Home Delivery Robot" were recognized and awarded for their creativity, design efficiency, and practical application. The **Line Follower Robot** demonstrated the ability to automatically follow a predefined path using sensors, while the **Smart Home Delivery Robot** showcased the concept of automated delivery within a household environment.

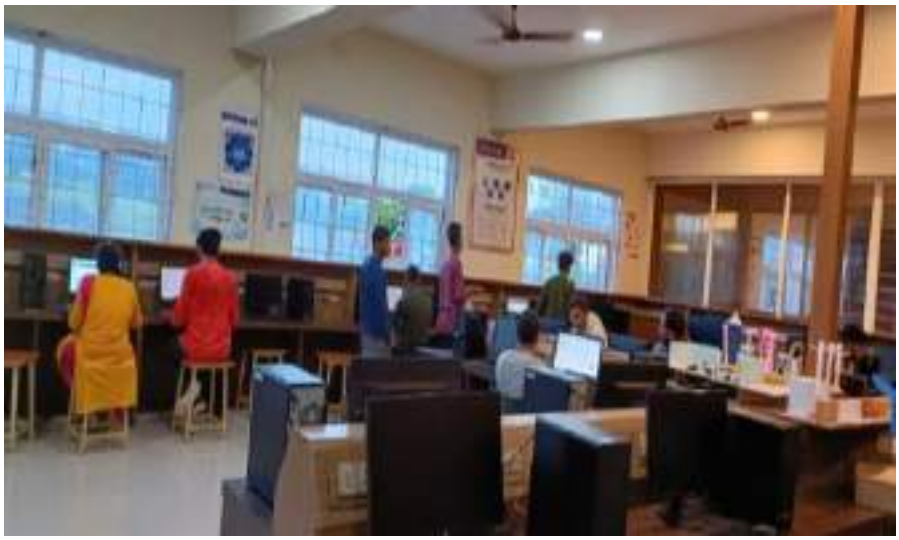
EWB CLUB



- **EWB Club** is to nurture and motivate students and professionals to undertake real life sustainable social projects and create Global Leaders. The Event on **"Brain Strom Competition"** was started on 01.11.2022. The theme of this Event is to concentrate on students interest in various research field. Since nowadays, advancements in sensing, mobile computing and server technologies completely changed the human's life style. Furthermore, it creates awareness, educate and train the faculty member and students to the amazing world of research.

PROGRAMMING CLUB

- **PROGRAMMING Club** conducted a event **"Python Coding Contest – II years"** on 10-10-2022. Another event named **"Python Coding Contest – III years"** on 14-10-2022 It was a Python coding contest on Hacker rank platform. This contest was scheduled for only second-year and third year students in a view to spike their interest in this tool. This contest enhanced the student's interest in Python programming. The main contest was conducted through "HackerRank," a browser-based platform that can automatically grade the students' work and provide feedback.



International and Industry Internship

INDUSTRY INTERNSHIP

•Venkata Meghana R, VTU12608 and Syed Ammena Kousar, VTU15861 has completed their project with title "Generation of PWM Signals Using Altair Embed" at Combat Vehicles Research & Development (CVRDE), Avadi, Chennai.

•Anish Sai Khande, VTU15332 and Madaka Karthik, VTU13636 has completed their project with title "Electronic Commutated of BLDC in Electric Vechice Using Matlab/Simulink " at Combat Vehicles Research & Development (CVRDE), Avadi, Chennai.

•Sruthi P, VTU15911 has completed their project with title "Digitization of Coriolis Vibratory Gyroscope" at DRDO, Hyderabad.

ABROAD INTERNSHIP

•Palivela Venkata Naga Ravi Teja, VTU12958 has completed their project with title "RSMA-enabled THz HAPS Communications using Ultra-massive MIMO Antennas" at Carleton University, Canada.

•Issac Kondreddy, VTU14974 has completed their project with title "A metaheuristic Algorithm for Breast Cancer Classification and Diagnosis" at Thompson Rivers University, Canada.

•Shaik Shameer, VTU15759 has completed their project with title "New face masks with MEMS microchannel filters" at Tamkang University, Taiwan.

•Velichetti Sravan Kumar, VTU13226, Pathi Manaswini, VTU12721 and Srilekha Yeddula, VTU16010 has completed their project with title "Prior Detection of self-driving cars using software reliability" at Chang Gung University, Taiwan.

•Rajan Kumar, VTU16223 and Naga Siva Kumar, VTU15523 has completed their project with title "Wavelet - Neural Networks for Embedded Image Recognition Application" at National Changhua University of Education, Taiwan.

•Palla Amarnath, VTU15150 has completed his project with title "Third Generation of Semiconductor" at National Chin Yi University of Technology, Taiwan.

•Sunkari Mula Vishnu Veeranjan, VTU13831 has completed his project with title "Reversible data hiding based on interpolation techniques" at National Chin Yi University of Technology, Taiwan.

Professional Body Activities

FDP on “Computational Intelligence – Algorithms and Implementation”

An **IEEE Sponsored One Week Faculty Development Program (FDP)** on **“Computational Intelligence – Algorithms and Implementation”** was organized from **26 December 2022 to 31 December 2022**. The primary objective of this FDP was to provide participants with comprehensive knowledge of modern computational intelligence techniques and their practical implementation in real-world applications. The program was designed to enhance the technical skills of faculty members, research scholars, and students by introducing them to advanced concepts in artificial intelligence and data-driven technologies.

A total of **43 participants from various reputed institutions** actively participated in the FDP. The sessions were conducted by experienced academicians and industry experts who shared their knowledge and practical insights on emerging technologies. The FDP included a combination of **theoretical lectures, interactive discussions, and hands-on demonstrations**, enabling participants to gain both conceptual understanding and practical exposure.

The program covered a wide range of topics including the **fundamentals of Artificial Intelligence, Machine Learning, Deep Learning, and Data Science using Python**. Participants were also introduced to **AI and ML implementation using Python programming**, where they learned how to apply algorithms to solve real-world problems. Special emphasis was given to computational intelligence techniques, data analysis, and model development using modern tools and frameworks.

Hands-on sessions allowed participants to **implement machine learning algorithms, explore data visualization techniques, and understand the process of building intelligent systems**. These sessions helped attendees gain practical experience in developing models and analyzing datasets effectively.

DVP talk on “Advances in Intelligent Systems and Smart Applications

The **IEEE Student Branch of Vel Tech** in association with the **IEEE Signal Processing Society Student Branch Chapter** organized a **Distinguished Visitors Program (DVP) talk** on the topic **“Advances in Intelligent Systems and Smart Applications”** on **10 October 2022** at the **ECE Gallery Hall**. The event witnessed enthusiastic participation from students and faculty members, with a total of **175 attendees** taking part in the program. The objective of this session was to provide participants with insights into the latest developments and applications of intelligent systems powered by Artificial Intelligence.

The distinguished speaker delivered an informative session highlighting the **rapid advancements in Artificial Intelligence and its integration into modern technological solutions**. The talk focused on how intelligent systems are transforming various sectors through automation, data analysis, and smart decision-making capabilities. Participants gained a deeper understanding of how AI technologies are shaping the future and improving efficiency in many real-world applications.

The speaker elaborated on the **important roles of Artificial Intelligence in areas such as Smart Homes, Smart Cities, Smart Agriculture, and Smart Healthcare**. Examples and case studies were discussed to demonstrate how intelligent systems can enhance convenience, improve resource management, increase productivity, and support sustainable development. The session also emphasized how emerging technologies like machine learning, data analytics, and IoT contribute to building intelligent and adaptive systems.

To make the event more engaging and interactive, the organizers conducted a **mini ICT-based quiz** related to the concepts discussed during the talk. Participants actively took part in the quiz, and winners were rewarded with **spot cash prizes**, which encouraged students to test their knowledge and stay actively involved throughout the session.

Overall, the Distinguished Visitors Program served as an excellent platform for **knowledge sharing, innovation, and academic interaction**. The event inspired students to explore research opportunities in Artificial Intelligence and intelligent systems while motivating them to develop innovative solutions for real-world challenges using modern technologies.

Technical Poster Design Contest

The **IEEE Signal Processing Student Branch Chapter of the ECE Department** organized a **"Technical Poster Design Contest"** on **17 September 2022**. The event was conducted with the aim of encouraging students to present innovative ideas and technical concepts through creative poster presentations. It provided a platform for students to showcase their knowledge, research insights, and design skills in emerging areas of engineering and technology.

Students from the department actively participated in the competition and demonstrated their understanding of modern technological advancements through well-designed posters. The contest focused on promoting **technical creativity, visual communication skills, and the ability to explain complex engineering concepts in a clear and concise manner**. Participants prepared informative posters that included diagrams, charts, and technical explanations to effectively convey their ideas.

A panel of faculty members and experts carefully evaluated the posters based on several criteria such as **technical content, originality, clarity of presentation, visual design, and relevance to the theme**. After a detailed evaluation, the **best posters with outstanding technical information and innovative presentation were selected and rewarded**. The judging process also provided constructive feedback to the participants, helping them improve their presentation and research skills.

The contest featured several **interesting and contemporary themes** for participants to explore, including **Artificial Intelligence in Healthcare, Smart Drones, Signal Processing for 5G Communication, Autonomous Vehicles, and e-Waste Management**. These topics encouraged students to think about the practical applications of technology in solving real-world problems and addressing modern challenges.

Overall, the event proved to be an engaging and educational experience for students. It helped them **enhance their research aptitude, creativity, and technical communication skills** while promoting awareness about emerging technologies. The contest also motivated students to actively participate in academic and professional activities organized by the IEEE student community.

Tech-Talk

The IEEE Signal Processing Student Branch Chapter of the ECE Department organized an interactive technical event titled “Tech-Talk” on 14 September 2022. The main objective of this event was to encourage students to improve their technical presentation skills, communication abilities, and confidence in expressing engineering concepts. The event served as a platform for participants to share their knowledge on various emerging technologies in the field of electronics and communication.

During the event, participants were asked to select a technical topic of their interest. They were given 10–15 minutes of preparation time to organize their ideas and structure their presentation effectively. After the preparation period, each participant delivered a short talk explaining the key concepts, applications, and significance of their selected topic. This format encouraged students to think quickly, organize technical information clearly, and present it confidently before an audience.

A wide range of interesting and relevant technical topics were provided for the participants. These included Evolution of Transistors, Information Technology in Communication, SONAR, RADAR, Medical Electronics Applications, Bluetooth Technology, Nanotechnology in Electronics, Wi-Fi Technology, 3D Integrated Circuits (3D ICs), and Smart Antennas. These topics allowed students to explore various aspects of modern electronics, communication systems, and emerging technological trends.

The presentations were evaluated by faculty members based on clarity of explanation, technical content, presentation skills, and overall confidence. Participants actively engaged in the event and demonstrated a good understanding of the topics while sharing valuable insights with their peers. The event also encouraged healthy academic interaction among students and helped them gain exposure to a variety of technological domains. Overall, the Tech-Talk event proved to be a highly beneficial learning experience, helping students strengthen their public speaking skills, technical knowledge, and critical thinking abilities. It also motivated students to stay updated with the latest advancements in electronics and communication engineering and to participate more actively in technical activities organized by the IEEE student community.

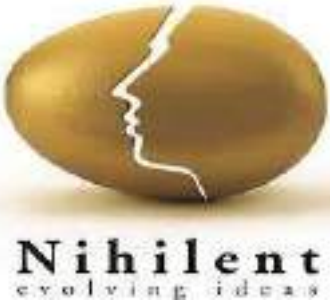
Placements

- 10 students have been placed in DXC Technologies with 4 LPA.
- 2 students have been placed in TCS Digital with 7 LPA.
- 34 students have been placed in TCS NINJA with 4 LPA.
- 2 students have been placed in Cognizant with 4 LPA with skill bonus.
- 88 students have been placed in Cognizant with 4 LPA.
- 47 students have been placed in Accenture with 4.5 LPA.
- 7 students have been placed in LTI with 4 LPA.
- 1 student has been placed in Aptean with 5.5 LPA.
- 2 student have been placed in Sasken Technologies with 5 LPA.

Placements

- 7 students have been placed in Embitel Technologies with 5 LPA.
- 7 students have been placed in Open Text with 9 LPA.
- 1 student has been placed in Odessa Technologies with 7.5 LPA.
- 7 students have been placed in Kaar Technologies with 6.5 LPA.
- 1 student has been placed in Ignitarium Technologies with 5 LPA.
- 58 student have been placed in Capegemini where 1 student placed with 7.5 LPA and 57 under 4.25 LPA.
- 5 students where each of them are placed in M/s. MountBlue Technologies with 4 LPA, Microchip with 10 LPA, ThoughtClan Technologies with 6 LPA, M/s. Sirius with 5 LPA and M/s. Hundai Motors with 7.87 LPA respectively.
- 5 students have been placed in AUTOMATIVE ROBOTICS with 3 LPA.
- 1 student has been placed in M/s. Data patterns with 4.2 LPA.

Placements



- 3 students have been placed in M/s. Nihilent with 4 LPA.
- 5 students have been placed in M/s. CGI with 3.93 LPA.
- 5 student have been placed in TATA ELXSI with 5 LPA.
- 1 students has been placed in M/s. Blue Binaries with 1 LPA.
- 7 student have been placed in Virtusa with 5.5 LPA.
- 3 students have been placed in CTS with 4 LPA and 6.75 LPA.
- 1 student has been placed in Acies Global with 5 LPA.
- 1 student has been placed in Infosys with 3.6 LPA.
- 1 student has been placed in Mu SIgma with 5 LPA.
- 2 students have been placed in Infosys with 7.25 LPA.
- 1 student has been placed in Walmart with 8.14 LPA.

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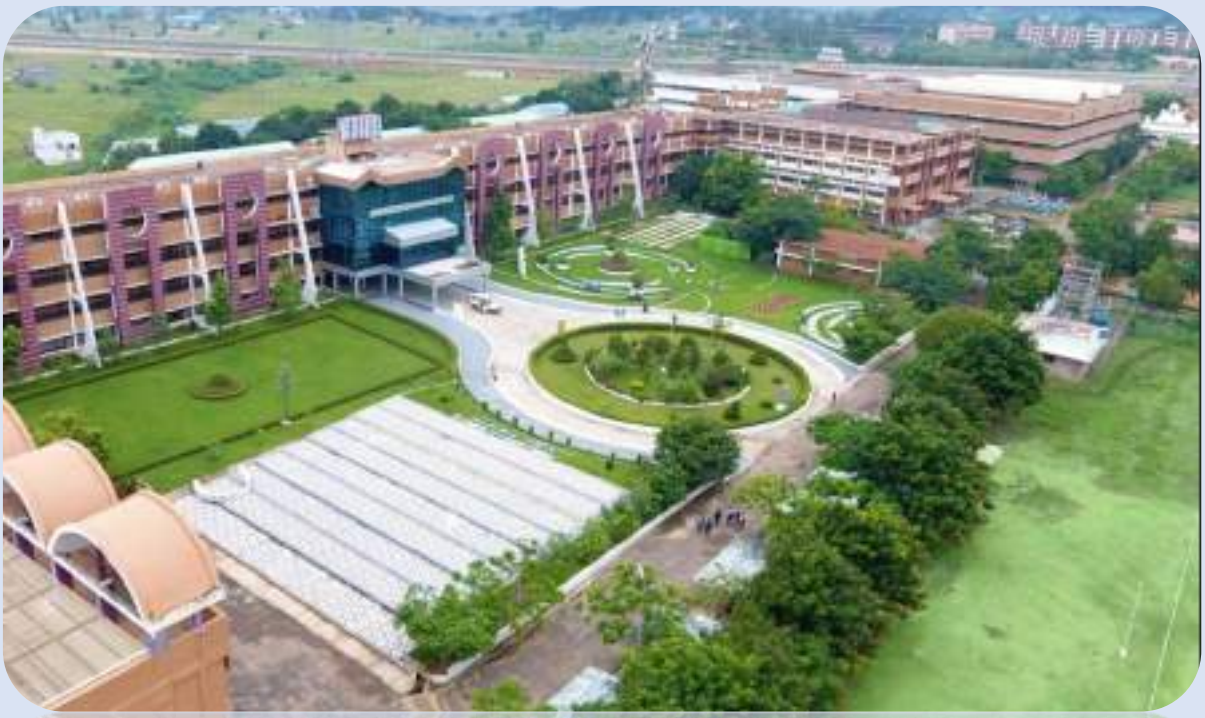

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NAAC A++

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