

# UPAGRAHA'23

National-level Technical Symposium

OCTOBER 11<sup>th</sup> & 12<sup>th</sup>, 2023



**SRI VENKATESWARA COLLEGE OF ENGINEERING**  
(Autonomous and affiliated to Anna University)  
Pennalur, Sriperumbudur(TK), Tamil Nadu - 602 117,  
India.

**SRI VENKATESWARA COLLEGE OF ENGINEERING**  
**(Autonomous- Affiliated to Anna University, Chennai)**

**DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING**

**Vision**

To excel in offering value-based quality education in the field of Electronics and Communication Engineering, keeping in pace with the latest developments in technology through exemplary research, raising the intellectual competence to match global standards, and making significant contributions to society.

**Mission**

- To provide the best pedagogical atmosphere of the highest quality through modern infrastructure, the latest knowledge, and cutting-edge skills.
- To fulfill the research interests of faculty and students by promoting and sustaining in-house research facilities to obtain reputed publications and patents.
- To educate our students, the ethical and moral values, integrity, leadership, and other quality aspects to cater to the growing need for values in society.

**Programme Educational Objectives (PEOs)**

- PEO1: Create value for organizations as employees at various levels, by improving the systems and processes using appropriate methods and tools learned from the program.
- PEO2: Run an organization successfully with good social responsibility as an entrepreneur, using the knowledge and skills acquired from the program.
- PEO3: Contribute to the future by fostering research in the chosen area as an erudite scholar, based on the motivation derived from the program.

## Message from HoD



It is a pleasure to head the Department of Electronics and Communication Engineering at Sri Venkateswara College of Engineering. For the past 37 years, the department has been offering excellent value-based quality education in the field of Electronics and Communication Engineering, keeping in pace with the latest developments in technology through exemplary research. It has raised its intellectual competence to match global standards and has made significant contributions to society.

The department works to address critical challenges faced by the industry, society, and academia. The growth of expertise in the department is meritorious. In keeping with the department's vision, the holistic development of the students is focused upon that instills a habit of continued learning and a sense of responsibility in them to contribute towards the betterment of society.

Upagraha'23, the national-level intercollegiate symposium of our department was organized by the Electronics and Communication Engineers Association, IETE-SF, and RAIC on the 11th and 12th of October 2023. A total of 360 students from 30+ colleges participated in the symposium. Ten different events were conducted which helped in the overall technical development of the students.

I congratulate the teaching and non-teaching staff, the editorial board, and students of the Department of Electronics and Communication Engineering for bringing in this edition of the Magazine to highlight the success of Upagraha'23. Wish you all the best.

Dr. G. A. Sathish Kumar  
Professor/HoD-ECE

## MESSAGE FROM FACULTY COORDINATORS



**DR.T.J.JEYAPRABHA,  
ASSOCIATE PROFESSOR, ECE**

It is indeed a proud moment for the Department of Electronics and Communication Engineering as the departmental magazine is issued. The department works relentlessly for the betterment of the students. The magazine highlights the success of Upagraha, the national-level symposium conducted by our ECE department. The department and the clubs under the department have been actively involved in organizing various technical events to help the students develop their skills. I thank the management, HoD, the faculties, organizing committee and the students for their efforts in bringing out this magazine.

I'm exhilarated in releasing the Departmental Magazine for the academic year 2023-2024. The role of education in today's era is not only to pursue academic excellence but also to require the overall development of a student. The department organizes technical and innovative events around the year helping the students become industry-ready. The magazine is a glimpse of the national-level symposium conducted by our department- Upagraha. I thank the principal, the HoD, the faculties, and the students for their extended support for every event.



**MR.S.ELANGO VAN,  
ASSISTANT PROFESSOR, ECE**

## UPAGRAHA'23

**SRI VENKATESWARA COLLEGE OF ENGINEERING**  
in association with  
**DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING**  
presents

# UPAGRAHA'23

**NATIONAL-LEVEL TECHNICAL SYMPOSIUM**  
**11<sup>TH</sup> & 12<sup>TH</sup> OCTOBER 2023**  
**REGISTRATIONS OPEN NOW!!!**

**REGISTRATION FEE:**  
1 DAY - ₹150  
2 DAYS - ₹250

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Upagraha'23 was a successful National-level technical symposium conducted by the Electronics and Communication Engineering Department of Sri Venkateswara College of Engineering. The event was organized by three prestigious clubs belonging to the ECE department namely: the ECE Association, the IETE-student chapter SVCE, and Robotics and Artificial Intelligence Club. The symposium served as a platform for students to expose their technical expertise develop their creativity and induce a sense of innovation. The event received an overwhelming response from students belonging to various colleges in Tamil Nadu.

## OBJECTIVE

The primary objective of the National Level symposium, Upagraha'23, is to create an inclusive environment where students, regardless of their background in ECE or non-ECE fields, whether from inter or intra-college, can gain comprehensive knowledge about various aspects of Electronics and Communication Engineering. Furthermore, this event serves as a catalyst for building connections among participants from diverse colleges across the state

## INAUGURAL CEREMONY

The inaugural ceremony commenced with the arrival of the chief guest, Ms. Ramya, Associate General Manager at NEC, along with Dr. G. A. Sathish Kumar, Head of the Department of ECE, and the faculty coordinators of the association, Dr. T. J. Jeyaprabha, Associate Professor-ECE, and Mr. S. Elangovan, Assistant Professor-ECE.



## ABOUT THE CHIEF GUEST



Smt. Ramya Gowrisankaran, AGM, NEC is an accomplished expert with a proven track record of experience in the Wireless Telecom Industry. She started her career as a Board Design Engineer and later handled multiple Product Designs and Development - Embedded systems/5G Radio/ Wireless Backhaul/Network Access switch/Aggregators etc. She has almost 20+ years of experience in the Telecom field. She is an expert in the field of product design and Development. She worked as a project manager at NEC and later became the senior manager. She excelled in the role of technical lead in ARICENT TECHNOLOGIES (Holdings) Ltd. She performed as a senior design engineer in MIDAS COMMUNICATION TECHNOLOGIES.

# DAY-1 EVENTS

## ARDUINO ALLEY



Arduino Alley was a successful technical event that challenged participants to create interactive games using Arduino and various sensors. Numerous teams took part in this event, making it a resounding success. The initial round featured multiple-choice questions (MCQs) covering the fundamentals of microcontrollers and sensors. The top performers from this round advanced to the next stage, where they were tasked with developing a prototype game using Arduino and sensors. The ultimate winners were determined based on the creativity and excellence of their designs.

The MCQ round evaluated participants' hardware knowledge, and students were selected based on their efficiency and completion time. A certain number of teams progressed to the second round. During the second phase, teams crafted sensor-based games, and the best creations were recognized as the winners. The event was coordinated by Mr. V Yokesh, Mr. R Ramesh Kumar, and Mrs.S Radhika.

### Winners of the event:



S Ashish, K Jagadish, K Gnanavel, and A S Ajay Kumar from Sri Venkateswara College of Engineering emerged as the victors in the event.

# ALGORITHM ALCHEMY

This coding event was the ultimate showcase of participants' programming prowess. In the initial round, participants had to identify and fix errors in code snippets, assessed through a pen-and-paper test. The top-performing teams advanced to the next round, where they faced coding challenges that required team members to switch after a certain period of time. The judging was based on their ability to code efficiently within time constraints.



## Winners of the event:



During the first phase, participants had to spot errors in the code, and successful teams proceeded to the second coding phase. The event's sponsors assessed the participants and acknowledged those who excelled. The event was coordinated by Dr. A. Ramya and Dr M.Kavitha.

The event was ultimately won by Madhusudhanan.K and Jeswin Swinton.J from Sri Venkateswara College of Engineering. This event not only enhanced participants' critical thinking skills but also stimulated their coding intellect.



# PROJECT EXPO



Project Expo stood as an unparalleled exhibition of innovative creations, showcasing the technical prowess of individuals driven by creative thinking. It featured a single-round showdown where participants faced judgment from a panel of versatile experts. The candidates were evaluated based on their presentation skills and the efficiency of their projects, which spanned various ECE domains, including embedded systems, robotics, digital signal processing, and communications.

In this dynamic setting, participants had the opportunity to engage with the judges, seeking insights and sharing the processes behind their projects. The event was coordinated by Dr. M. Athappan, Mrs. K. Srividhya, Mr. S. Senthil Rajan, Mrs. K. S. Subhashini, Dr. A. Prasanth, Mrs. S. Kalyani and Mrs. R. Kousalya.

## Winners of the event:



The winners were Shraven GS, Aaron Ranjith, Balakumaran, and Moulivignesh from Jerusalem College of Engineering.

# BITFLOW

BitFlow was a digital system design event, consisting of two challenging rounds. The first round featured a series of multiple-choice questions (MCQs) designed to evaluate participants' knowledge of digital system design principles, logic gates, and circuit analysis. This portion of the event served as a test of theoretical understanding and foundational knowledge in the field of digital design.



## Winners of the event:



In the second round, participants had to design digital components using a digital circuit simulator. In this round, participants had to demonstrate their ability to create and implement functional digital circuits, showcasing their practical design skills and problem-solving abilities. The event was successfully coordinated by Dr. R. Priyadharshini, Mr. L.K. Balaji Vignesh, and Mrs. B Sarala.

The event the winners, Sanjay, Haridharan, and Sneha A from Sri Venkateswara College of Engineering, demonstrated exceptional skills. This event provided students with a valuable opportunity to explore the complexities of hardware and enhance their understanding of digital design.

# VENTURE VISION



The Event Venture Vision took participants on an extraordinary journey of innovation. It provided a platform where individuals could unleash their inner visionaries, turning their ideas into reality in an environment where entrepreneurship converged with creativity. The event encompassed two rounds. In the first round, each team was assigned a product to pitch. Within the allocated time, team members were required to eloquently showcase their assigned product to the judging panel. Subsequently, the top 10 teams advanced to the second round.

In round two, each team was given the task of presenting an existing company. The goal was to effectively showcase the company's strengths, accomplishments, and potential in the market. Teams had to create a persuasive pitch by highlighting key points, addressing challenges, and outlining a promising vision for the company's future. M. Bindhu, Mr. M. K. Varadarajan, and Mrs. C. Gomatheeswari Preethika successfully coordinated the event in a smooth way.

## Winners of the event:



The winners were Vikash. S.K., Srimathi. R, S. Tamil Nilavan and Shakeel Irfan from Sri Venkateswara College of Engineering.

# DAY-2 EVENTS

## TECH CPR

Tech CPR was an event where participants were tasked with repairing a malfunctioning PC and restoring it to working condition. During the event, participants demonstrated their expertise in computer hardware. This event emphasized the importance of problem-solving skills and hands-on technical expertise. The event comprised two rounds.



### Winners of the event:



Round one showcased an examination based on multiple-choice questions which assessed participants' knowledge on computer hardware. Top performers were promoted to round two, where they had to diagnose and repair a malfunctioning PC. Winners were scrutinized based on their ability to figure out and solve the problem.

Mr. P. Arul, Mr. N. Sathish, and Mr. P. Muthukumaran ensured the event's smooth execution through their efficient management.

P. Meenaloshini and R. Praveen Kumar, from Sri Venkateswara College of Engineering, demonstrated their skills in hardware repairing. They emerged as the triumphant participants in the competition, showcasing their expertise and determination.

# PROMPTIFY



Promptify was an engaging and intellectually stimulating event where participants showcased their creative problem-solving skills. The event comprised two rounds that put their prompt generation and solution development abilities to the test. In the first round, participants tackled a challenging pen-and-paper test that required them to think critically and devise clever prompts for various problems. This round assessed their ability to identify the core issues and formulate effective questions.

The second round pushed participants to the next level. Here, they had to generate precise prompts for a diverse range of complex problems. Once the prompts were ready, participants had to devise innovative and well-thought-out solutions, showcasing their ability to not only identify issues but also provide practical answers. The event coordinators, Mr. Kanagaluru Venkatesh and Dr. S. Vijayanand were in charge of ensuring the event's seamless operation.

## Winners of the event:



The winners, Madhav B and Subash V from Sri Venkateswara College of Engineering emerged as shining examples of strategic thinking and creativity.

# E-GADGET MARKET PLACE

The E Gadget Marketplace was an engaging event that tested participants' electronics skills, creativity, and problem-solving abilities. In this event, participants had to bid for electronic components and use them to create a functional circuit. The event consisted of two rounds.

In round 1, teams were presented with a challenging problem and were provided with a range of devices as potential solutions, and their task was to select one device from the available options to effectively address the given problem. Furthermore, the teams were required to provide a comprehensive and well-justified rationale for their device selection.

## Winners of the event:



In Round 2, teams were tasked with designing circuits on a given budget. They had to select affordable components, construct the circuit, and attain the desired output. Scoring was based on both cost-effectiveness and time efficiency, creating a holistic assessment of their technical and financial abilities.

Mrs. Mary Cynthia, Mrs. S. M. Mehzabeen, and Mr. D. Silambarasan fulfilled the role of judges for the events and, concurrently, played an instrumental part in enhancing the event's overall coordination.

The victors of the competition were, R. Ganeswaran and S. Aravindan, hailing from the Adhiparasakthi Engineering College. Their outstanding performance and expertise shone brightly, securing them the coveted title of winners.

# INTELLECT NEXUS



The paper presentation event was a showcase of cutting-edge research and ideas. It provided a platform for the participants to disseminate their latest research work and discoveries. Participants who had registered were required to submit abstracts, and those deemed effective were selected for the presentation round.

Each presenter meticulously prepared their presentations, often consisting of slides, visual aids, and well-researched content to effectively communicate their ideas. Throughout the event, participants had the opportunity to engage in thought-provoking discussions, pose insightful questions, and exchange ideas with their peers. The event was overseen by Dr. N. Kumaratharan, Dr. P. Jothilakshmi, Dr. S. R. Malathi, Dr. R. Gayathri, and Dr. D. Menaka,

## Winners of the event:



The recipients of the awards were Vaishnavi S and Niveditha S from Sri Sairam Engineering College.

# CONNECTIVERSE

The Connectiverse event took participants on a captivating journey into the depths of technology and innovation. Each round concealed a cryptic challenge, testing their problem-solving skills and technical knowledge. The event encompassed three rounds.

Round one was a Technical Crossword challenge, participants delved deeply into the intricate domain of technology, unraveling cryptic clues to unveil the concealed insights of the digital world.

The second round beckoned with a Memory Game infused with technical depth. The participants' task was to recall, adapt, and conquer the technical unknown.

## Winners of the event:



Ashwin R and Akshay G, from Sri Venkateswara College of Engineering, emerged as the champions due to their remarkable skill in deciphering clues in every round of the competition. Their ability to successfully decode the clues set them apart and led to their well-deserved victory.



During the third round, the competition was centered around technical connections. In this round, participants were presented with images and challenged to make connections and identify the underlying technical terms associated with them.

Mr. S.P. Sivagnana Subramanian and Mrs. S.M. Abinaya served as judges, and played a key role in ensuring the seamless conduction of the event.



## About the Chief Guest



Dr. V. Narayanan is a distinguished scientist and visionary leader in the field of rocket and spacecraft propulsion. Dr. Narayanan currently serves as the Director of the Liquid Propulsion Systems Centre (LPSC), a vital component of the Indian Space Research Organization (ISRO). With a career spanning nearly four decades, he has played a pivotal role in advancing India's space exploration capabilities.

One of his significant achievements was leading the successful development of the C25 Cryogenic Stage for the GSLV Mk III vehicle, a milestone in India's space endeavors. Additionally, he played a crucial role in overcoming challenges related to cryogenic propulsion technology for the GSLVMk II vehicle.

Under his leadership, the LPSC has delivered numerous propulsion systems and control powerplants for launch vehicles and satellites, making significant strides in space exploration. His role as Chairman of key decision-making forums demonstrates his commitment to ensuring the success of ambitious space missions.

Dr. V. Narayanan is an exemplary scientist and leader whose unwavering dedication has significantly contributed to India's achievements in space exploration.

## Key note address



Dr. V. Narayanan, the Director of the Liquid Propulsion Systems Centre (LPSC) at ISRO, addressed the audience, sharing his invaluable insights on personality development and the journey of ISRO missions. He began by emphasizing the importance of character development for students to excel in their paths and also discussed the vital role of student-professor interaction in gaining a deeper understanding of a specific field.

Dr. Narayanan then provided a comprehensive overview of the evolution of ISRO's missions, starting from their inception to their most recent achievements like Chandrayan 3 and the Vikram L1 mission, which aimed to land on the sun. The students attentively absorbed his enlightening speech, leaving them inspired and motivated for their personal development. Dr. Narayanan's gracious presence added prestige to the occasion.

# VALEDICTORY CEREMONY



The valedictory ceremony commenced with the arrival of Dr.G.A. Sathish Kumar, Head of the Department, Department of ECE, and faculty coordinators of the associations: Dr.T.J.Jeyaprabha, Associate professor, Department of ECE; Mr.S.Elangovan, Assistant professor, Department of ECE and the participants and winners of various events along with the members of the organizing committee.

## OUTCOME

Upagraha 23, a nationally recognized symposium, has garnered the interest of students from both inter and intra-college backgrounds, providing them with valuable insights and exposure to the extensive field of Electronics and Communication Engineering (ECE). Additionally, it has effectively fostered connections among intercollegiate students, serving as an invaluable platform for learning and gaining hands-on experience with the latest developments in this dynamic domain.

## ORGANISING COMMITTEE

**Chief Patron :** Dr.M.Sivanandham, Secretary, SVEHT

**Patron :** Dr.S.Ganesh Vaidyanathan, Principal, SVCE

**Convenor :** Dr.G.A.Sathish Kumar, Professor & HOD

**Faculty Co-ordinators :**

Dr.T.J.Jeyaprabha, ECEA,IETE-SF and RAIC Coordinator

Mr.S.Elangovan, ECEA, IETE-SF and RAIC Coordinator

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