

IEEE STUDENT BRANCH ACTIVITIES REPORT 2022-2023

SATHYABAMA

INSTITUTE OF SCIENCE AND TECHNOLOGY

(DEEMED TO BE UNIVERSITY) JEPPIAAR NAGAR, RAJIV GANDHI SALAI, CHENNAI-60019 www.sathyabama.ac.in





Preface

This annual report is the outcome of the IEEE Student Branch, Sathyabama Institute of Science and Technology for the year 2022. The objective of the activities conducted by the student branch is to familiarize the students with the implementation of knowledge. The report is prepared based on the information gained during every programmes.

Branch Counsellor

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About IEEE

IEEE is the world's largest technical professional organization dedicated to advancing technology for the benefit of humanity. IEEE and its members inspire a global community to innovate for a better tomorrow through its more than 423,000 members in over 160 countries, and its highly cited publications, conferences, technology standards, and professional and educational activities. IEEE is the trusted "voice" for engineering, computing, and technology information around the globe.

About SATHYABAMA IEEE SB

The inception of the IEEE Student Branch (IEEE SB) of Sathyabama Institute of Science and Technology (Deemed to be University) was in the month of September 1991. Throughout the years, it is an active and vibrant branch. Every year the branch is added up with active student members who play a major role in building up the branch and keeping it active. The branch was started with 21 members and at the end of 1999 it had 375 members. As an addon, the branch is awarded as the 5th largest branch in the world, 2nd largest in the Asia pacific region and again received largest membership in the year 2012 and 2013. In addition, the branch has received certificate of appreciation for organizing activities towards advancement of IEEE and Engineering professions. IEEE student branch consistently organize technical events like workshops, hands on training and special lectures in cutting edge technologies. Students expand their knowledge by attending these events of advance technologies. Also, student branch hosts a National Level Technical Symposium "SILICON" every year; as a platform for students to showcase their leadership and technical skills.

Vision

- To enable, empower and energize the student members to enhance their technological interests and motivate them to excel in technical skills
- To provide a platform for student members to improvise them in various managerial and technical qualities

Mission

- To create an awareness among students about benefits of IEEE
- To organize technical awareness programmes
- To organize skill development programmes
- To form technical groups and motivate the student members to develop projects useful for the community
- To organize regular events like workshops, technical symposiums and contests
- To encourage student members to achieve more awards sponsored by IEEE

IEEE SB Executive Committee 2022-2023

Selection Procedure and Guidelines

The circular for IEEE SB Executive Committee Selection Interview for the year 2022 was sent on 05.01.2022 to all the fourth and third-year students of School of Computing (CSE and IT) and School of Electrical and Electronics Engineering (ECE and EEE) through Deans of schools/ Heads of the Departments/ Class Counsellors. The interested students were asked to register with their basic information and biodata on or before 14.01.2022. 67 students were shortlisted based on their skills and interests from the 135 registered candidates were called for the direct interview on 27.01.2022 and 28.01.2022. Direct interview was conducted by IEEE SB counselor and staff coordinators. The evaluation report was made based on students' elegance, perspective, communication, interactive and leadership skills. The following executive committee with 15 students was selected from the direct interview based on the evaluation report for the year 2022. This executive committee will be active till the end of this year.

Executive Committee

Chairman: Ms. MANUSHREE AYYANAR (III Year ECE)

Vice-Chairman : Ms. AKSHARA (III Year ECE)

Secretary: Ms. PADMAJA ANANTHA LAKSHMI (III Year CSE)

Treasurer : Mr. SARAVANAN (III Year IT)

Webmaster: Mr. SRIJITH (III Year IT)

Registration: Ms. ALINA MUSTAQ (III Year IT)

Member Welfare : Mr. SHAKTHI VIGNESH (III Year IT)

Program Committee: Mr. POOJASRI (III Year ECE)

Publicity Committee: Ms. SINDHUJA (III Year ECE)

Design Committee: Mr. ABHIRAM RAVIPATTI (III Year CSE)

Section Coordinator: Ms. ANUGRAHA (III Year CSE)

IEEE SB STUDENT ACTIVITIES

The new executive committee was introduced on 02.02.2022 and their roles and responsibilities were described. IEEE SB regularly meets fortnightly with executive committee, staff coordinators and branch counselor. Meetings were conducted with the agenda of conducting IEEE awareness programmes to first year to third year students of School of Computing and School of Electrical and Electronics Engineering in the month of June and July to enhance the membership development. The next agenda was to organize the activities to develop the technical skills of students. The activities like workshops and technical talks by experts were conducted. The next agenda was to bring out the leadership skills of executive committee. The consolidated list and details of the activities were given below.

S.NO	DATE	TITLE OF THE PROGRAMME
1	07.07.2022 to	Digital sirguit design using EDA tools
1	09.07.2022	Digital circuit design using EDA tools
2	08.07.2022 to	Technical skill development program on "Analog and Digital
2	16.07.2022 electronics"	electronics"
	12.07.2022	
3	and	SILICON 2K22
	13.07.2022	
4	15.07.2022	Guest talk on "Our future with Semiconductors"
5	19.08.2022	Guest talk on "Dream company essentials"
6	09.02.2023 &	Unlock your creativity – Learn Microsoft word and Power
U	10.02.2023	point
7	18.03.2023	IEEE Awareness Programme
8	20.03.2023	Panoroma-Poster making contests

DIGITAL CIRCUIT DESIGN USING EDA TOOLS



IEEE STUDENT BRANCH organizes Three Day Workshop on "Digital Circuit Design using EDA Tools" in association with CoreEL Technologies from 07.07.2022 to 09.07.2022 for final year ECE Students. The speaker interacted with students Mentor graphics Tool. Also, about IC design, verification & manufacturing which efficiently create the world's most advanced integrated circuits (ICs) and create ICs with the optimal balance of power, performance, area, and functionality. Verification at all levels - from C++ prototype to silicon test to digital twin. Meet security, functional safety, and silicon lifecycle requirements. Deliver coverage, signoff, and higher yield faster with AI-powered EDA tools. A clear understanding of the EDA tools which helps them to do a very own VLSI project using Mentor Graphics.



Topic	Digital circuit design using EDA Tools
Date(s) & Time	07.07.2022 to 09.07.2022 & 10.00 AM TO 03.00 PM
No. of	120
Participants	
Nature of	Students
participants	
Venue	VLSI Design Lab, Department of ECE
Student	Ms. A Padmaja, Ms. Anusha Chegoni, Mr. Vasanth R
Coordinators	

TECHNICAL SKILL DEVELOPMENT PROGRAM ON "ANALOG AND DIGITAL ELECTRONICS"



Department of ECE organizes Technical Skill Development 08.07.2022 to 16.07.2022 for final year ECE Students focusing on all core courses to make students prepare for their placements. The speakers interacted with students about Electronic Devices, Digital Logic Circuits, Analog Integrated Circuits, Digital Signal Processing, CMOS VLSI Design, Embedded Systems, Microprocessors and Microcontrollers and RF System Design. A clear understanding of the basics and insights gives a clearer roadmap for the students to crack the placements.



Topic	Technical skill development program on "Analog and Digital
	electronics"
Date(s) & Time	08.07.2022 to 16.07.2022 & 06.00 PM TO 07.00 PM
No. of	240
Participants	
Nature of	Students
participants	
ZoomID/Venue	https://sathyabama-ac-
,	in.zoom.us/j/789176453785?pwd=VAo3bTloTusbroifrtyamdtUjlTQjFydz0

SILICON 2K22



IEEE student branch of Sathyabama Institute of Science and Technology organized a two day national level technical symposium — SILICON 2K22 on 12th and 13th July 2022. Students from various institutions had enrolled and participated in this



Director-Administration addressed the gathering about the student activities. Dr.T.Sasipraba, Vice Chancellor delivered the presidential address. Ms.Maria

event. This symposium was started with the inaugural ceremony. The IEEE student branch counselor Dr. M.S.Godwin Premi welcomed the dignitaries and participants. Dr.G.Sundari,





Catherine Jeyapriya, Vice President felicitated the chief guest, Shri. Vijay Veeran.K Scientist-D & Joint Director, Bureau of Indian Standards, Chennai with a memento. Chief Guest delivered the inaugural address about the quality and Ms.Manushree, Chairman, IEEE SDGs.

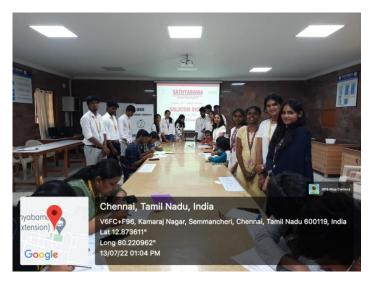
Student Branch delivered the vote of thanks. The inaugural session was continued by the key note session about 'Standards" delivered by the chief guest. Three events were held on 12th July 2022 and they were Do app, Proshow and Cryptolad. There are 157 participants from 9 different institutions. The Do-App event, a mobile application development competition was conducted in two phases at IT Tower Lab. On Day 1(12th July), the event started at 11:30 AM. On this day students were required to create the front-end part for their respective applications. On Day 2, the event commenced at 9 AM. Students who were selected for Round 2 assembled at the IT Tower Lab and started working on the back-end aspect of their applications. Mrs. Brumancia started evaluating their works and the results were announced by 10:30 AM. SILICON 2K22's Proshow, referred to as Project Demonstration, is a technological event. The occasion took place on July 12, 2022. Devices lab at Department of ECE served as the event's location. This event included participation from students from a number of disciplines, including CSE, IT, ECE, EEE, EIE, Bio Medical, and Mechatronics. Proshow attracted participants from a number of academic institutions as well as Sathyabama. Based on the submission of their abstracts and reports, a select group of 19 students were shortlisted. The start of this event was at 11:30 AM. The competitors had to provide a functional prototype of their concept in addition to a power point presentation or poster describing it. Since this was a group activity, teams could only have a maximum of two people. Dr. K.V. Karthikeyan, professor of ECE, and Dr. Susitra, Professor of EEE, were on a panel to assess the projects at this event. The primary indications were three crucial elements: novelty, methodology, and presentation. The attendees responded to the panel's questions with enthusiasm. At the end, the winners were announced. The Cryptolad event, a decoding event was conducted in Lecture Hall 1 at 11:30 AM. There were two rounds. The round 2 participants who decoded correctly was announced as winner. The Designa'thon event, a web development competition was started at 10:30

AM on 13.7.2022 and problem statements were assigned randomly to each participant. Participants were asked to build the front end of the given problem statement using any web development framework. The evaluation of the front-end



website started at 1:00 PM by Dr. Jeberson Retna Raj based on the criteria Presentation, User Interface, Coding, Creativity, Usability, and the winners were announced. The Quaranteam event, a technical quiz completion was conducted on July 13, 2022 at VLSI Lab. This event consists of several different quizzes designed to evaluate students' technical knowledge in an entertaining and interesting way. The technical test was the first round. There were 49 teams who took part. The top 8 teams with the highest points from the 49 teams were chosen for the next round. Circuitrix

was the second round, and it was held at the ECE board room. This exercise tested the memory and ability to draw the specified circuit within the allotted one minute. And in order to keep ahead of the other teams, this exercise brought out the participants' agility. Dumb Charades was the third round. In this round, the other player had to guess the technical word that one of the teammates had to say. The number of right guesses



made within the allotted five minutes was used to grade the teams. Reorder was the focus of the fourth round. The alternatives for the questions were jumbled, and the teams were handed buzzers to use if they understood the solution. The evaluation was done based on who could press the buzzer

first and give the correct answers. The top 5 teams from the eight teams were chosen for the following round. Crossword was the fifth round. Two Crossword puzzles from

the topic they choose from were handed to the teams. Evaluation was done based on the percentage of accurate responses. The Connections round was the sixth one. Teams were tasked with identifying the proper term



from a sequence of photographs that, when put together, form a technical word. Due to a tie for second place between two teams, the teams were forced to take part in a rapid buzzer round and were scored according to the percentage of questions they got right and the winners were announced. The Blind Coder, a coding completion was conducted at CSE AI &ML Lab at 11 AM on 14.7.2022. Two coding tasks were assigned to each participant in two levels. After the verification of the code, the code is run in the system and verified and the winners were announced based on the error free single run. The winners of all the events were announced at their respective event venues and the price distribution took place at the Valedictory session held at the ECE board room. The winners and runners of all events were appreciated with the certificate and prize. Dr. T. Sasikala, Dean, School of Computing, Dr. T.Ravi - Head of Department/ECE and Dr. Subhashini, Head of Department/IT distributed the prizes. The winners were congratulated once again for their enthusiasm and active participation.



Topic	Silicon 2K22
Date(s) & Time	12.06.2022, 13.06.2022 & 10.00AM to 12.00PM
No. of	105 (Internal 85 & External 10)
Participants	
Nature of	Students
participants	
Venue	University Campus
Student	All IEEE Execom Members
Coordinators	

GUEST TALK ON "OUR FUTURE WITH SEMICONDUCTORS"



IEEE STUDENT BRANCH proudly organizes a Guest Talk on "Our Future with Semiconductors" by Mr Arul Mahesh Jagadeesa das Senior Business Development Manager (Fabless, System & EDA) at Imec, Belgium on 15.07.2022 for final year ECE Students. The speaker interacted with students about Modern VLSI trends are gradually moving from large to smaller devices in which the IC industry has constantly continued to make devices geometry smaller. Optimizing the sales and marketing of semiconductor technology. For the past century, semiconductor sales have grown steadily. Experts predict the industry will achieve \$542.64 billion in annual revenue by 2022. This means semiconductor sales and marketing teams should expect to grow the existing market size. A clear understanding of the trends gives a clearer roadmap for more efficient and effective chip designing.





Topic	Guest talk on "Our future with Semiconductors"
Date(s) & Time	15.07.2022 & 10.00AM to 11.00AM
Resource Person	Mr. Arul Mahesh Jagadeesa Das
	Senior business development manager (Fabless, Systems &
	EDA) at Imec, Belgium
No. of	120
Participants	
Nature of	Students
participants	
Venue	ECE Board Room
Student	Ms. Anantha Lakshmi P, Ms. Anusha Chegoni, Mr. Vasanth R
Coordinators	

GUEST TALK ON "DREAM COMPANY ESSENTIALS"



The IEEE event on "Dream Company Essentials" convened on aiming to equip attendees with vital insights for pursuing opportunities in their dream companies. The talk, led by experienced speaker Mr. Raja K, covered key topics such as understanding dream companies, essential skills, resume building, successful interviews, and networking strategies.



Participants gained valuable insights into crafting tailored resumes, honing both technical and soft skills sought by dream companies, and mastering successful interview techniques. The event fostered an interactive environment, concluding with a Q&A session where attendees sought personalized advice, enhancing their readiness to

navigate the competitive job market and pursue positions in their dream organizations.



Topic	Guest talk on "Dream company essentials"
Date(s) & Time	19.08.2022 & 01.15 PM to 02.15PM
Resource Person	Mr. Raja K
	Operation manager, Amazon (Seattle, USA)
No. of	185
Participants	
Nature of	Students
participants	
Venue	Dr. Remibai Jeppiaar Auditorium
Student	Ms. Sindhuja, Mr. Vasanth R, Ms. Anantha Lakshmi P
Coordinators	

UNLOCK YOUR CREATIVITY – LEARN MICROSOFT WORD AND POWER POINT





The Workshop started with the college promo video. The speaker was given a small introduction and the session was handed over to him. Resource Person has discussed the basic need for Microsoft office application. Live demo and video were shown to the students from Class 6 to 9. The session was very interactive with the active participants.

The event was executed with precision and enthusiasm, creating a conducive environment for participants to enhance their digital skills. The event kicked off with an engaging introduction, setting the tone for a hands-on learning experience. The tutorials on Microsoft Word seamlessly guided participants through the essentials



of document creation and collaborative editing, while the segment on PowerPoint empowered them to craft visually compelling presentations.



The interactive nature of the event was a key highlight, with participants actively applying the skills learned through practical exercises. The sessions were not just informative but also fostered collaboration, allowing attendees to share insights and learn from each other. The event's success was further emphasized during the dynamic Q&A session, where participants enthusiastically sought

clarification and shared their experiences. Feedback from participants reflected a heightened confidence in using Microsoft Word and PowerPoint for various purposes, indicating that the event successfully achieved its goal of enhancing digital literacy.

Topic	Unlock your Creativity - Learn Microsoft Word and Power
	Point
Date(s) & Time	09.02.2023 to 10.02.2023 & 01.00PM to 04.00PM
Resource Person	Ms. Dhivya. G, Ms. Devadharshini M, Ms. Deekshitha M, Ms.
	Drisshya S, Ms. Divya Krishnan
No. of	75
Participants	
Nature of	Students
participants	
Venue	St. Pauls Matriculation School, Semmancheri
Student	Mr. Lohith S, Mr. Sathwik S, Mr. Durga Prashanth, Mr. Samir
Coordinators	Kumar Yadav, Mr. Rupesh B

IEEE AWARENESS PROGRAMME



IEEE Student Branch arranged an IEEE Awareness Program for the Department of Electronics and Communication Engineering's second-year students on 18th March 2023. This programme provided students with the chance to consider the advantages of being a member of the IEEE organization. It revealed information on the IEEE membership.



Dr. Vedanarayanan, IEEE Faculty Coordinator from the department of Electronics and Communication Engineering, conducted the session. Students interacted extensively and learned about the benefits of IEEE. It serves as a valuable platform for knowledge enhancement, providing up-to-date insights into the latest technological developments, research findings, and industry trends. Through workshops and

training sessions, participants have the opportunity to hone their professional skills, including leadership, project management, and communication. The networking opportunities afforded by the program are invaluable, allowing individuals to

connect with experts, researchers, and peers, potentially leading to collaborative projects or career advancements.

Moreover, the program addresses ethical considerations, fostering a deeper understanding of responsible and sustainable technological practices. By providing exposure to cutting-edge research and innovative ideas, participants gain a competitive edge in their respective fields. The global perspective offered by IEEE programs, along with access to international resources, further enriches



participants' understanding of the technological landscape. Additionally, the program encourages inclusivity and diversity, contributing to the creation of a more equitable work environment. Overall, IEEE awareness programs not only elevate individual professional profiles but also foster a community of collaboration and knowledge-sharing, positively impacting the broader technology industry.

IEEE Awareness Programme offers professionals an array of benefits. The career advancement opportunities extend beyond certifications, providing insights into industry-specific standards and trends that can significantly impact one's professional trajectory. The exposure to various IEEE resources, including publications and journals, enhances the depth of knowledge and keeps participants abreast of groundbreaking research.



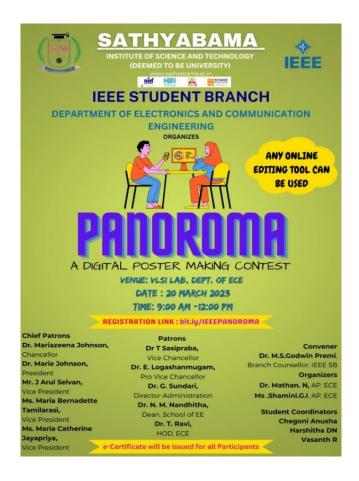
The program also emphasizes the importance of innovation, encouraging participants to think creatively and contributing to a culture of continuous improvement within their organizations. Furthermore, the inclusive nature of the program, coupled with discussions on diversity, ensures a well-rounded perspective on the societal implications of technology.

The program not only imparts theoretical knowledge but also focuses on practical problem-solving skills, allowing participants to navigate real-world challenges more effectively.

Lastly, awareness of IEEE initiatives and their societal impact fosters a sense of purpose, aligning professionals with the broader mission of advancing technology for the benefit of humanity. In essence, IEEE Awareness Programs act as catalysts for holistic professional development, equipping individuals with a multifaceted skill set and a nuanced understanding of their role within the global technological landscape.

Topic	IEEE Awareness Programme
Date(s) & Time	18.03.2023 & 11.15AM to 12.15PM
Resource Person	Mr. Dr. V Vedanarayanan
No. of	125
Participants	
Nature of	Students
participants	
Venue	Mega class room
Student	Ms. Anusha Chegoni, Mr. Vasanth R, Ms. Harshitha N
Coordinators	

PANOROMA -POSTER MAKING CONTEST



The IEEE Student Branch hosted the event 'PANOROMA'- A digital poster creating contest. This event drew a total of 45 students from various departments. Everyone put on their creative hats for this occasion and created eye-catching posters. The participants were given five themes to choose from namely,

- 1. Bionic Eye a possible path toward the artificial retina
- 2. Power of Media
- 3. Information Technology Boon to society or Bane to society
- 4. IPR Violation in IT Services
- 5. Role for International Organization in Promoting the Spread



Panorama Poster Making Event offers students a myriad of advantages, fostering a harmonious blend of creativity exploration. This unique technological platform empowers participants to unleash their creative prowess, translating complex technological concepts into visually

captivating posters. Embracing the theme, 'Technological Horizons: A

Panorama of Innovation,' students are encouraged to delve into diverse technological domains, promoting an interdisciplinary approach to problemsolving. Beyond artistic expression, the event cultivates essential communication skills as participants articulate intricate ideas in a visually engaging manner.



The exploration of various technological trends and advancements not only expands participants' knowledge but also positions them at the forefront of innovative thinking. Networking opportunities abound, allowing students to connect with like-minded peers and potentially forge collaborations. As participants navigate the poster creation process, they develop crucial project management, attention to detail, and time management skills.



The emphasis on conveying the societal impact of technology instills a sense of responsibility and ethical awareness. Successful participation not only garners visibility and recognition but may also lead to further academic and professional opportunities. Ultimately, the Panorama Poster Making Event not only integrates art and technology but serves as a

catalyst for inspiring future projects and fostering holistic development among participating students.

Topic	Panoroma -Poster making contest
Date(s) & Time	20.03.2023 & 09.00AM to 12.00PM
No. of	105
Participants	
Nature of	Students
participants	
Venue	VLSI design Lab, Department of ECE
Student	Ms. Anusha Chegoni, Mr. Vasanth R, Ms. Harshitha N
Coordinators	

Contact us: ieeesathyabama@sathyabama.ac.in

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