SATTVA

Sai Vidya Institute of Technology

(Affiliated to Visvesvaraya Technological University, Belagavi | Recognized by Govt. of Karnataka | Approved by AICTE, New Delhi)

Accredited by NBA (ECE, CSE, ISE, MECH, CIVIL)

Rajanukunte, Bengaluru – 560 064

Department of Electronics & Communication Engineering

VISION

- To become a center of academic excellence with innovations to make a significant contribution to the society in the field of Electronics and Communication Engineering

MISSION

- To Educate and Empower the students with state-of-art knowledge and innovation in Electronics & Communication Engineering to meet the global challenges
- To imbibe the professional competency and ethics congenial to the society through training

About the Department:

Department of Electronics and Communication Engineering at Sai Vidya Institute of Technology has an UG (B.E) intake strength of 120 students divided into two sections. The primary objective of the department has been to impart quality technical education to the students. The department is known for its quality, practical based and research-oriented education imparted to students, which helps the students to face the real-world challenges of the fast-changing technical world. To make the students technically aware of the advancements in technology around the world the department provides additional training sessions, workshops, hands on, webinars, Industrial Visits and other events. We also provide the students with personality development classes, SSB training for armed forces and GATE Coaching, for the student's overall development.

Program Educational Objectives (PEOs):

PEO1:	• Design & Develop Innovative electronic systems
PEO2:	• Effectively communicate technical information, successfully lead and participate in a multi-disciplinary team environment
PEO3:	• Engage in lifelong learning through continuing education and industrial practice
PEO4:	• Demonstrate professional ethics and social awareness

Program Specific Outcomes (PSOs):

PSO1	• Design and simulate Electronics and Communication systems using concepts and tools of electronic circuits, signal processing, VLSI technology and communication.
PSO2	• Architect, partition and select appropriate technologies for implementation of a specified electronics & communication system

Director's Message

I am delighted to note that Department of Electronics and Communication Engineering, SVIT is bringing out Department Newsletter. I appreciate the enthusiasm of eminent members of the Department who have contributed to the Newsletter. Department newsletter definitely provides a platform to showcase the activities and achievements of the students and staff such as: conferences attended by staff members and students, competitions won by students, innovative projects carried out by students with the guidance of staff, among others. I wish the students and staff of Department of Electronics and Communication Engineering, all success.

Prof. M R Holla
Director, SVIT

Additional Director's Message

Greetings to all the staff members, student friends, parents and other stake holders. I am delighted to present the newsletter of Department of Electronics and Communication and Engineering. With core emphasize on academics, Department of Electronics and Communication Engineering also motivates and nourishes students and staff members in cocurricular and extracurricular activates. The college standing by the spirit of its Vision had hosted many technical events to showcase the innovations of the young budding engineers. We continue to support the cause of contributing to the society and to the nation by providing a holistic growth to the students by imparting quality education and shaping their character through Induction Training programme.

Prof. A M Padma Reddy
Additional Director, SVIT

Principal's Message

I am extremely happy to know that the Department of Electronics and Communication Engineering, SVIT is bringing out newsletter for the academic year 2021-2022 and this is an ongoing process portraying the various Departmental activities. It is great to find a considerable number of achievements in academic and non-academic activities which certainly prove that our staff and students are adequately equipped and possess necessary skill -sets to bring laurels to the institution. I wish that this number may grow in the years to come. My Congratulations to ECE team.

Dr. H S Ramesh Babu
Principal, SVIT

HOD's Message

Dear Students,

On behalf of entire Department of ECE, I welcome you all. I am very sure after the end of fours year you will come out with flying colors professionally qualified. Our Department has outstanding teachers such as Prof. Y Jayasimha, Dr. Chaya B M , Dr. Venkatesha M & Dr. Asha K among others. Department of ECE has done tremendous achievements in the field of research and developments by Dr. Narayan K, Dean R & D catalyzed & supported by Vision Group on Science and Technology (Dept. of IT, BT & ST Govt. of Karnataka). The department is constantly encouraging and supporting the students to present.

Prof. Vikramathithan A C
HOD, ECE

About SATTVA:

We are always on the go at the Electronics and Communication Engineering at Sai Vidya Institute of Technology, whether it's conducting Workshops, Webinars, Events, Competitions, or a range of other activities for our students to broaden their horizons beyond the classroom. We are proud of our students, staff's, and department's accomplishments in a variety of technical and nontechnical activities.

In 2016, our department introduced a Sattva to capture all of our activities and accomplishments. Sattva is a bi-annual newsletter that chronicles a variety of accomplishments and events.

The editorial team is thankful to all those who contributed to this edition. We appreciate your support and feedback.

Happy Reading…!

Editorial Board:

Chief Editor: **Prof. Vikramathithan A C**

Editorial Board Members: **Dr. Chaya B M**

Prof. Nayana K

Student Editors:

Mr. Prajwal N (4th B)

Ms. Aishwarya K (4th B)

Mr. Sohan S (4th A)

Mr. Anjan S (6th A)

Mr. Anvith Sharma (6th B)

Ms. Shreya U S (6th B)

Ms. Padmashree J (8th A)

Mr. Likith C S (8th B)

Mr. Vinamraa V (8th B)

Advisory Board Members:

Dr. T Srinivas

Associate Professor, Department of

ECE, Indian Institute of Science, Bangalore

Dr. Preeta Sharan T

Professor, Department of ECE, The

Oxford College of Engineering, Bengaluru

Dr. Srikanth P C

Professor, Department of ECE,

Malnad College of Engineering, Hassan

Mr. Srikanth

HR Manager, Velankani Electronics, Bengaluru

Mr. Sripad

Design Engineer, Sri Dutt Technologies Pvt. Ltd, Bengaluru

Dr. Kavitha E

Department of Telecommunication Engineering, Sir. MVIT Bengaluru

Dr. Hanumantha Raju

Professor, Department of ECE, BMSIT, Bengaluru

Dr. Rajani

Associate Professor, Department of ECE, RNSIT, Bengaluru

Ms. Ananya N

Alumni (2013-17 Batch), Working at Hewlett Packard Enterprise Technical Solutions Consultant

Faculties of ECE:

Prof. Y Jayasimha, Dean Academics & Associate Professor

Dr. Narayan K, Dean R&D, Professor

Dr.Mukesh Kumar Singh, Professor

Prof. Vikramathithan A C, Associate Professor & HOD

Dr. Chaya B M, Associate Professor

Dr. Venkatesha M, Associate Professor

Dr. K Srinivas Rao, Associate Professor

Dr. Asha K, Assistant Professor

Dr. Manoranjan Kumar, Assistant Professor

Mr. Suryanarayana N K, Assistant Professor

Ms. Pavithra G S, Assistant Professor

Mr. Pavan Kumar E, Assistant Professor

Ms. Nayana K, Assistant Professor

Mr. Darshan R V, Assistant Professor

Ms. Prabha K, Assistant Professor

Ms. Akshith Monnappa, Assistant Professor

Mr. S Manjunatha Chari, Assistant Professor

Ms. Monisha Raj, Assistant Professor

Mr. Nagayya S Hiremath, Assistant Professor

Mr. Advaith P R, Assistant Professor

Ms. T M Divya, Assistant Professor

Ms. Pavithra B G, Assistant Professor

Ms. Tejashree S, Assistant Professor

Events/Workshops/Webinars Conducted

Mini-Project Presentation (Electronic Devices)

The Mini Project exhibition was organised on 22nd and 23rd of February 2022. Around 30 Mini Projects were exhibited by 3rd Semester Students as a part of extended learning. The exhibition has been a result of hard work and enthusiasm.

Based on the evaluation done by Dean Academics, HOD and Faculties, the Top 3 Projects were awarded with Certificates and a Pen-drive as a token of appreciation.
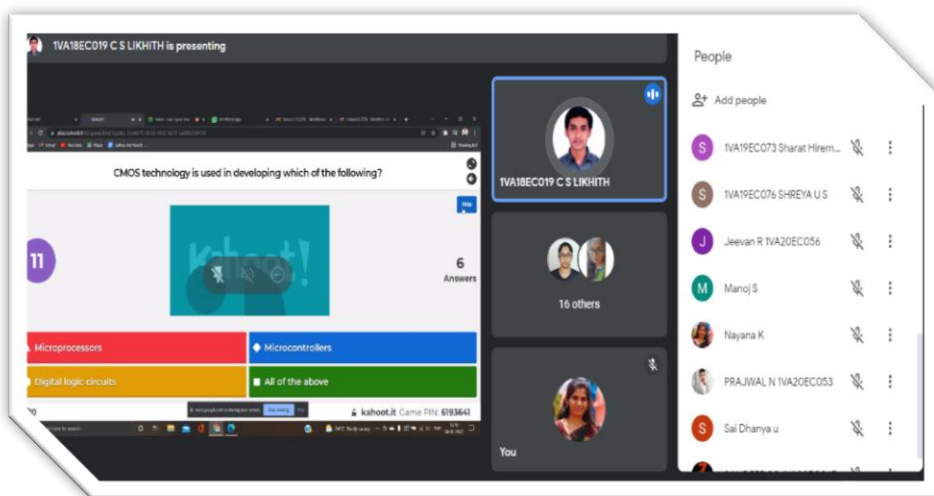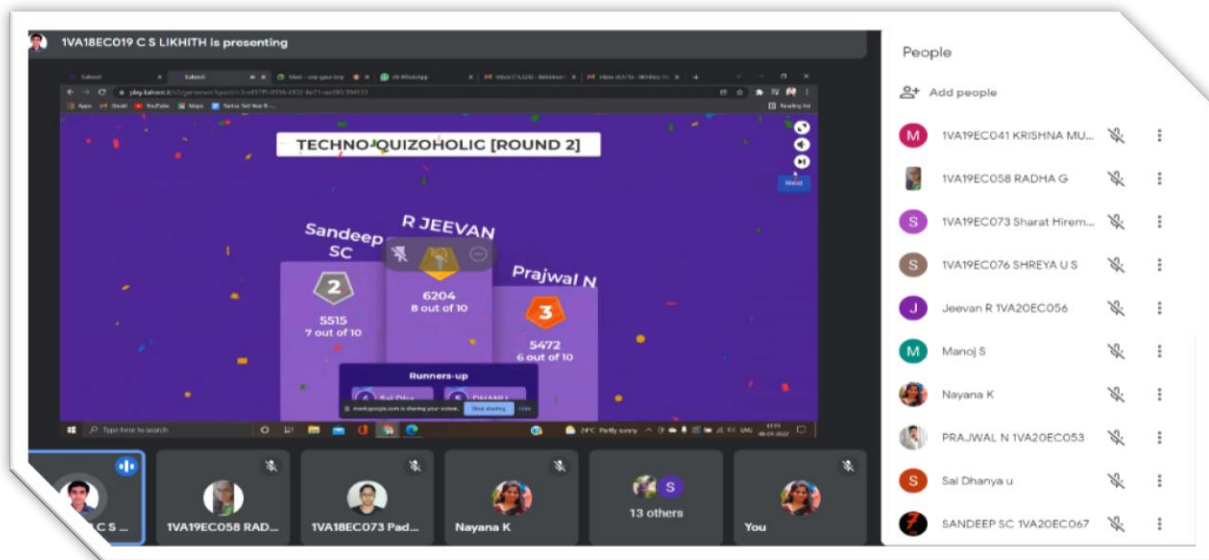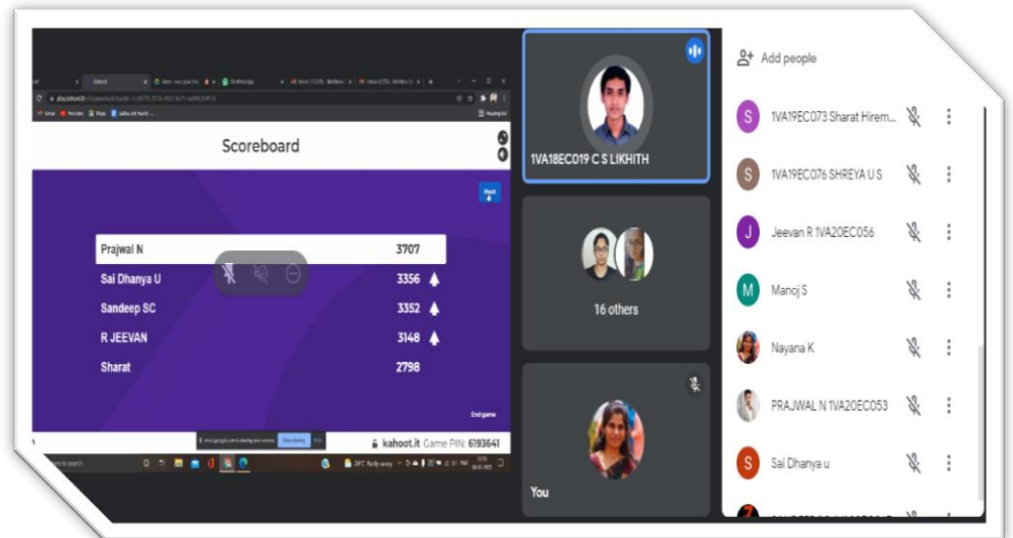
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Forum Activities

Tech-Enact

The Tech Gene forum of ECE department organized its first forum activity "**Tech-Enact**" on December 11th 2021 at 11:15am. The activity was technical based and was a group event.

"TECH ENACT" is a technical game where a participant picks up a chit which has a technical word and acts accordingly in front of their team members without clues like lip-reading, pointing and spelling. If the team guesses the word within a minute, they secure 5 points.

The activity was conducted in 2 rounds. Top 3 winners were awarded with certificates.

Techno Quizoholic

The Tech Gene forum of ECE department organized the "**Techno Quizoholic**" forum activity on **January 8th 2022** at 10:30am in **online** mode. The quiz was technical based and was an individual event. The quiz was conducted in 2 rounds. 12 students were shortlisted from round 1 out of 50+ participants and the final round of Quiz was held for the finalists.

The top 3 winners were awarded with certificates.

Code Hackathon:

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Department of Electronics and Communication organized "Code Hackathon", a coding event on 25th of February 2022.

This event was organised to all the Departments and saw massive registrations.

It was conducted in 3 rounds. The participants were challenged with real time coding problems and they were given the flexibility to code in their language of preference.

The Top 3 teams were awarded with Certificates and Cash Prize.

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Industrial Visit

Bharat Electronics Limited (BEL) is an Indian Government owned Aerospace and Defence Electronics Company. It primarily manufactures advanced electronic products for ground and aerospace applications. BEL is one of the nine PSUs under the Ministry of Defence of India. It has been granted Navratna status by Government of India

The students of ECE got an opportunity to visit BEL on 18th December 2021.

Webinars Conducted

On March of 28th 2022, Department of Electronics and Communications in association with IEEE SVIT Photonics Society Student Chapter and Institute Innovative Council SVIT conducted a Webinar on "Live Demonstration of SETFOS Software: Solar Cell and OLED to calculate Optical & Electrical Properties". The Speaker of the event was Er. Anil Kumar Sharma, Managing Director Impulse Technology, Gurgaon, Haryana. A live demonstration was given on Simulation, Fabrications and Modelling of Organic Semiconductor materials.

MOU WITH RAO INSTITUTE

Sai Vidya Institute of Technology has signed an MOU with M/S Rao Institute, a subsidiary of LAB2MARKET (an IISC Start up) for establishing centre of excellence in "Railway Skill Development Lab" in catering to skill development of Electronics/Civil/Electrical/Mechanical students of SVIT.

INVITED TALKS BY FACULTIES

Dr.Narayan K:

1. Delivered Invited talk on "Machine Learning", PSNA Institute of Technology on 09-10-2021

2. Delivered talk on "NIRF & Atal Ranking of Institutions on Innovation and Achievements (ARIIA)", to SASTRA Deemed University, Kumbakonam, on 8th Dec 2021.

3. Delivered talk on "Design and Development of Cost Effective Fluorescent Organic Light Emitting Diodes (OLEDs)" as Keynote Speaker as part of AICTE Sponsored STTP "Emerging issues of VLSI Design" at ITM University Gwalior during the period of 22nd Nov. to 26th Nov. 2021

Dr Venkatesha M

1. Invited Talk on "FDTD for photonic sensor waveguides", AICTE Sponsored Faculty Development Program in "PHOTONICS" held (Online Mode) during November 2-6 2021, Organized by Department of Physics, Guru Jambheshwar University of Science and Technology Hisar-125001.

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2.   Invited Talk on "Recent developments in Photonic crystal fibres", 5 days FDP on "Recent Trends in the World of Photonics" Sponsored by AICTE Training and Learning (ATAL) Academy July 26-30, 2021 organized by Department of ECE, RNS Institute of Technology.

3.   Invited Talk on " Demo on Simulation Modelling using ANSYS Lumerical Tool ", 5 days FDP on "Recent Trends in the World of Photonics " Sponsored by AICTE Training And Learning (ATAL) Academy July 26 - 30, 2021 organized by Department of ECE, RNS Institute f Technology.

4.   Invited Talk on " Demo on Simulation Modelling using Intellisuite ", 5 day FDP on "Recent Trends in the World of Photonics " Sponsored by AICTE Training And Learning (ATAL) Academy July 26 - 30, 2021 organized by Department of ECE, RNS Institute of Technology.

5.   Resource Person in AICTE Training and Learning (ATAL) Academy Online Elementary FDP on "Quantum and Photonics" on the topic " Hands on Training on Simulation and Modelling of Photonic Structures using ANSYS Lumerical FDTD ", from 29/11/2021 to 03/12/2021 at Malnad College of Engineering, Hassan.

FACULTY PATENT

Patent details -2021-22

Sl. No	Name of the inventors	Title of the Patent	National/International
1.	Pavan Kumar E Nayana K Bina Rajan G Kusumanjali Anusha K R Bhavana B	Design and Implementation of an Autonomous Grain Analysis and Grading System. **Patent Journal No:** 44/2021 **Published date:** 29/10/2021	**National**
2.	Pavan Kumar E Sadique Ali Hashmi S Vignesh Tanupriya AG Suparna C	Development Of Quadcopter for Search Operations with Human Detection Abilities **Patent Journal No:** 38/2021 **Published date:** 17/09/2021	**National**
3.	Pavan Kumar E Manoranjan Kumar	Early Detection of Atherosclerosis with cloud IoT. **Patent Journal No:** 51/2021 **Published date:** 17/12/2021	**National**
4.	Prof. Vikramathithan A C Dr. Manoranjan Kumar Prof .Pavan Kumar E	Intoxicant Sensor Based System Implementation for Vehicles. **Published date:** 10/9/2021	**National**

NPTEL Course Details for the Academic Year 2021-2022

Sl. No.	NPTEL Course Duration	Subject	No of Registration	No of Certification	Name of Certified Faculty/Students
1	Jul - Dec 2021	Digital Circuits - online	1	1	Samyak Darshan S Jain
2	Jul - Dec 2021	Cloud computing - online	1	1	Apeksha G Raj
3	Jul - Dec 2021	Basic Electrical Circuits - online	1	1	Samyak Darshan S Jain
4	Jul - Dec 2021	Introduction to Industry 4.0 and Industrial Internet of Things - online	1	1	Apeksha G Raj
5	Jul - Dec 2021	Principles of Management - online	1	1	Srivatsa P S
6	Jul - Dec 2021	Control engineering - online	1	0	..
7	Jul - Dec 2021	Introduction to Advanced Cognitive Processes - online	1	1	Rakshith K B
8	Jul - Dec 2021	Analog Electronic Circuits - online	1	0	..
9	Jul - Dec 2021	Introduction to internet of things - online	1	1	N Kushal
10	Jul - Dec 2021	Introduction to Research - online	1	1	Dr. Asha K
		Total	10	8	Students - 7 Faculty -1

EVEN Semester 2021-22					
Sl. No.	NPTEL Course Duration	Subject	No of Registration	No of Certification	Name of Certified Faculty/Students
1	Jan - Mar 2022	Effective Engineering Teaching In Practice	5	5	Prof. Nayana K
					Prof. Divya T M
					Prof. Nagayya S Hiremath
					Prof. Pavithra B G
					Prof. Advaith P R
2	Jan - Mar 2022	Effective Writing	2	2	Dr. Asha K
					Shashank C
3	Jan - Apr 2022	Research Methodology	2	2	Prof. Prabha K
					Prof. Akshith Monnappa K
4	Jan - Apr 2022	Signal Processing Techniques And Its Applications	2	1	Rohan A S
		Total	11	10	Students - 2 Faculty - 8

FACULTY PUBLICATIONS:

Sl. No	Name Of The Journal/Conference	Title	Year Of Publication	DOI	National/ International
		Dr. Narayan K			
1	Micro and Nanoelectronics Devices, Circuits and Systems	Analysis and Design of Surface Plasmon Resonance Waveguide for Sensing Application	2021	https://doi=10.1007/978-981-16-3767-4_10	International
		Dr. Chaya B M			
2	"Lecture Notes in Electrical Engineering (LNEE)"Book Chapter series.	Analysis of Optical effects of different Anodes on Organic Light Emitting Diode	2021	http://doi.org/10.1007/978-981-16-3767-4_9	International
3	IEEE International Conference on Recent Trends in Electronics, Information & Communication Technology (RTEICT)	Modelling and FDTD Analysis of OLED using Nano Photonic structures to reduce losses	2021	10.1109/RTEICT52294.2021.9574014	International
4	2021 IEEE International Conference on Electronics, Computing and Communication Technologies (CONECCT), Bangalore ,India	"Analysis of different photoactive materials and its optical effects on Organic Photo Detector	2021	10.1109/CONECCT52877.2021.9622606	International
5	2021 IEEE 11th International Conference on Intelligent Data Acquisition and Advanced	Modeling an Enhancement of Optical Effect of Nanosphere on	2021	10.1109/IDAACS53288.2021.9660962	International (Tier 1)

	Computing Systems: Technology and Applications, Cracow, Poland, held on September 22-25,2021	Organic Light Emitting Diode",			
Dr. Venkatesha M					
6	Silicon	Design and Modeling of Ultra-compact and Highly-sensitive Silicon Bragg Grating Sensor for Biochemical Sensing Applications	2022 (IF- 2.67)	https://doi.org/10.1007/s12633-022-01740-5	International
Dr. Asha K					
7	Micro and Nanoelectronics Devices, Circuits and Systems	Analysis and Design of Surface Plasmon Resonance Waveguide for Sensing Application	2021	https://doi=10.1007/978-981-16-3767-4_10	International
Mr.N. K. Suryanarayana					
8	Micro and Nanoelectronics Devices, Circuits and Systems	Analysis and Design of Surface Plasmon Resonance Waveguide for Sensing Application	2021	https://doi=10.1007/978-981-16-3767-4_10	International

Faculties who have completed AICTE-UHV Training

Name of the UHV trained faculty	Certificate Number
Dr. Narayan K	F:No AICTE/FDP-SI/OnlineWorkshop/201/40286
Dr. Asha K	F:No AICTE/FDP-SI/OnlineWorkshop/201/40333
Prof. Suryanarayana N K	F:No AICTE/FDP-SI/OnlineWorkshop/201/40287
Prof. Nayana K	F:No AICTE/FDP-SI/OnlineWorkshop/201/83963
Prof. Darshan R V	F:No AICTE/FDP-SI/OnlineWorkshop/201/84595
Prof. Akshith Monnappa K	F:No AICTE/FDP-SI/OnlineWorkshop/201/84460
Prof. Manjunathachari S	F.No AICTE/FDP-SI/OnlineWorkshop/201/88014
Dr. Venkatesha M	F.No AICTE/FDP-SI/OnlineWorkshop/201/88018
Dr. Manoranjan Kumar	F.No AICTE/FDP-SI/OnlineWorkshop/201/88019
Prof. Prabha K	F.No AICTE/FDP-SI/OnlineWorkshop/201/88031
Mr. Advaith P R	F.No AICTE/FDP-SI/OnlineWorkshop/201/122359
Ms. Tejashree S	F.No AICTE/FDP-SI/OnlineWorkshop/201/122350
Mr. Nagayya S Hiremath	F.No AICTE/FDP-SI/OnlineWorkshop/201/122399
MS. Divya T M	F.No AICTE/FDP-SI/OnlineWorkshop/201/123544
Ms. Pavithra B G	F.No AICTE/FDP-SI/OnlineWorkshop/201/122328