

# ELECTRONICS VAARTA

Issue I, 2023

## Principal, SCET

Dr. Hiren Patel

## Faculty Members

- Prof. Chirag N. Paunwala - Professor, HoD
- Prof. Maulin M. Joshi - Professor
- Prof. Niteen B. Patel - Associate Professor
- Prof. Nehal N. Shah - Associate Professor
- Prof. Pranav B. Lapsiwala - Associate Professor
- Prof. Neeta H. Chapatwala - Assistant Professor
- Prof. Ketki C. Pathak - Assistant Professor
- Prof. Vandana J. Shah - Assistant Professor
- Prof. Sarosh K. Dastoor - Assistant Professor
- Prof. Dhiren P. Bhagat - Assistant Professor
- Prof. Chhaya P. Suratwala - Assistant Professor
- Prof. Pritesh N. Saxena - Assistant Professor
- Prof. Chintan H. Panchal - Assistant Professor

## Message from Head of Department



*It is my honor to welcome you to the Department of Electronics and Communication Engineering for another promising academic year. As the Head of Department, I am delighted to lead this community of talented researchers, innovators, and future engineers. Our department has a rich legacy of developing professionals who push the boundaries of technology to create positive change. I urge you to approach this year with confidence in your abilities and determination to succeed. We have the opportunities to work on cutting-edge projects that span artificial intelligence, VLSI design, robotics, and so on. I encourage you to get involved and apply your skills to tackle real-world challenges. Learning happens not just in classrooms but also in labs and through hands-on experiences. Our faculties are here to support students each step of the way. Never hesitate to reach out to us for academic or personal guidance. We are interested in helping you to maximize your potential. I am excited to see all that we will accomplish together this year. Wishing you a fulfilling semester and an outstanding academic year ahead!*

~Prof.(Dr.) Chirag N Paunwala

*"Electronics have undeniably brought about numerous benefits to our lives, revolutionizing the way we live and interact with the world. Electronics have automated many tasks that were once time-consuming, such as manual record-keeping and calculations. This has freed up people's time for more productive and enjoyable activities. The main advantages of using electronic systems are cost saving, improved communication, entertainment, online education, medical advancement, security and surveillance and traffic management. In our department we run many clubs and activities that enable students to get innovative ideas, startups, job opportunities, thrive for higher study and help society to live a blissful life."*

~Team Editorial

## Editorial Team



**Dr. Vandana Shah**  
Asst. Prof.



**Vatsal Sheth**  
ECE 1st Year



**Devanshi Patel**  
ECE 1st Year



**Nainesh Gurav**  
ECE 1st Year



**Maitry Mungara**  
ECE 1st Year

**"The educated differ from the uneducated as much as the living differ from the dead". -Aristotle**



### **An expert talk on IoT career awareness**

An expert talk on career awareness for IoT was organized by the Research and Development Cell of Electronics and Communication Department, co-ordinated by HOD Prof. (Dr.) Nehal Shah and Prof. (Dr.) Vandana Shah, and attended by 80+ students from various departments of SCET and GEC Surat. Event was held on 4<sup>th</sup> March, 2023. The speaker, Mr. Pranav Purohit (Associate Director at elnfochips), shared his knowledge about IoT and demonstrated a cloud server. Mr. Purohit has developed products for various industries and possesses technical, project management, and embedded skills.



### **Cyber Warrior Seminar**

The Cyberdojo experts led the Cyber Warrior seminar with the objective of raising awareness of cybersecurity among students. To fulfill this objective the event was coordinated by Prof. (Dr.) Nehal N Shah. Seminar was held on 10<sup>th</sup> February, 2023. It was followed by a quiz, and three winners were awarded prizes. Additionally, the students were provided with credentials to enroll in a 15-days Certified Cyber Security Fundamentals Course for free (normally a paid course), courtesy of SCET/SU. Upon completion of the course, students were granted a certificate to add to their credentials.



### **Robotic Master Training and Certificate Programme**

SCET-Surat's Electronics and Communication Engineering and Computer Engineering Departments received a grant from the Knowledge Consortium of Gujarat to organize a 10-days Robotics Masters training and certificate program for 40 students from various engineering disciplines. Coordinated by Prof.(Dr.) Nehal N Shah and Prof.(Dr.) Pariza Kamboj. The program was held from 23<sup>rd</sup> January 2023 to 4<sup>th</sup> February 2023 and covered emerging areas of engineering such as Basic Electronics, Blockie Block coding, Gears and Mechanical structures for Robots, 3D printing, Mobile App development, Arduino, WiFi module ESP32, Raspberry Pi, and Python programming. The program was part of the TEERTH scheme, which aims to enhance knowledge and skills in various subjects for students in Gujarat.



### **An informative session on High Speed Board Design**

An informative session on "High Speed Board Design" in collaboration with IETE Surat Sub Center and elnfochips, Ahmedabad. The event, under the supervision of Prof. Pritesh Saxena, aimed to inspire and educate students about the world of embedded systems and hardware development. Session was held on 17<sup>th</sup> April, 2023. The session, which featured experts Mr. Priyesh Pandya and Mr. Mihir Patel, provided valuable insights into various aspects of embedded systems, hardware design, and PCB layout. They explained the significance of component selection, reactance, and practical considerations for electronic projects. The students were enthused by this hands-on approach, gaining practical knowledge and appreciating the experts' efforts. The event concluded with a vote of thanks, and the experts were honored with mementos.



**“Electronics: Where creativity and science spark together”**

**- Olivia Ohm**



## Industrial visit to Adani Hazira port

A department organized a one-day industrial visit to Adani Hazira Port for 41 EC second year students accompanied by Prof. Dr. Maulin M Joshi and Prof. Neeta H. Chapatwala. Industrial visit was arranged on 21<sup>st</sup> August, 2023. The visit aimed to show how theoretical knowledge can be applied in real industries. Students learned about the production process, the importance of courage, trust, and commitment in the industry. The visit provided a practical learning experience, broadening students' horizons beyond the classroom.



## Faculty Achievements

**Prof.(Dr.) Chirag Paunwala**, was awarded a meritorious contribution to the cause of Education and Academics for "Creating an Enlightened Society". In addition, he received a grant of USD 2000 from HAC, SIGHT, and SPS for the project titled "Early Detection of Dyslexia using EEG Signal Analysis". Moreover a grant of USD 1500 was received by him for the national level seminar NeTSiP 2022 from IEEE SPS USA. He was also chief guest editor of EAI-Springer book (on biochemical signal and image processing with Artificial intelligence), EAI-Springer book (on IoT application for Healthcare system) and the Scopus index special thematic.



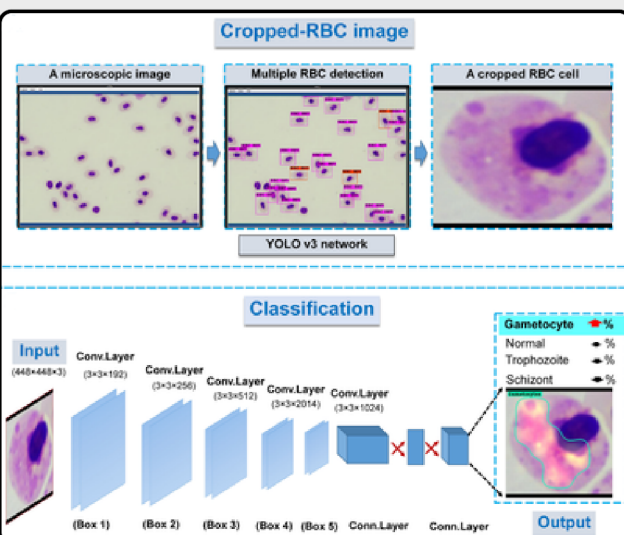
**Prof.(Dr.) Pranav B Lapsiwala and Prof. Pritesh Vasava** authored a paper titled 'Link handling for the atmospheric turbulence using LSTM neural networks in free space optical (FSO) communication.' Their work is featured in the Journal of Optical Communication, and it was published on 4<sup>th</sup> July 2023, in Volume 44.



**Prof.(Dr.) Maulin Joshi** has made a significant contribution as an author for writing the original English AICTE Technical Books based on AICTE model curriculum on Consumer Electronics for second year diploma program. His work has been instrumental in providing students with a comprehensive understanding of the subject matter, covering topics such as electronic circuits, digital electronics, and microprocessors, and so on.



**Prof.(Dr.) Nehal Shah** has received a Certificate of Appreciation from Gujarat Technological University for her outstanding contribution as a Visheshagya for NBA Accreditation. This recognition is a testament to her hard work and expertise in her profession. The achievement is an inspiration to all those who aspire to make a difference in their field and a reminder of the importance of recognizing individuals who make a positive impact.



## Innovation in Electronics

Yarlagadda Rama Krishna and Bhavanam Sree Poojitha's research on the identification of malaria parasites in blood samples, leveraging image processing technique delves into a revolutionary approach to detect malaria parasites in blood samples. By harnessing image processing techniques, this innovative method promises to advance malaria diagnosis significantly. The system offers an efficient tool for healthcare professionals, enhancing their ability to identify and manage malaria cases accurately. With the power of image processing, the method aims to improve the speed and precision of parasite detection, contributing to more effective malaria treatment and control. This work holds promise for medical practitioners and patients alike, offering a path towards better diagnostic and therapeutic solutions in the battle against malaria, a disease of global concern.

**"The mind ones enlightened cannot again become dark."**

**-Thomas Paine**



## Image Sensing Revolutionizes Vehicle Safety

Modern vehicles are equipped with a variety of sensors, and vision-based sensing is the fastest-growing area. With advanced driver assistance systems (ADAS), automakers aim to address the major cause of accidents: human driver error. Inattention or distraction accounts for a significant portion of accidents. Forward-looking cameras, in combination with image analysis software, can detect obstacles in the vehicle's path, predict object trajectories, and take avoiding action when necessary. Multiple cameras offer a 360-degree view, preventing minor accidents and improving safety. ADAS not only enhances driver awareness but also assists in adhering to speed limits, reducing the risk of accidents.



## Alumni Talk

The Faculty of Electronics and Communication Engineering organized an interactive session called "Share What I Gain," initiated by the SCET Alumni Association. The session was held on 25<sup>th</sup> July, 2022. It aimed to guide undergraduate students on job opportunities, career counseling, and personal experiences in the technology-driven world. Mr. Kashyap Kapadia, a 2005 alumnus and Mulesoft Architect, led the session. He emphasized the importance of curiosity and problem-solving skills in achieving childhood dreams and discussed industry expectations for fresh engineering graduates. Mr. Kapadia highlighted the demand for knowledgeable engineers in Mulesoft and expressed interest in hiring some of the students. The students appreciated the session and looked forward to more such events.

## Student Corner

### Academic Achievement

Arya Shah, Niket Singala, Deepak Shamsheer, Rahul Agarwal (2022-23) ranked first in the MSP Cup 2022, R-10 level.

### Sports Achievement

Devansh Thakkar (2022-23) won gold medal in Taekwondo in GTU at State Level Tournament.

### Cultural Achievement

Nisha Bagadia (2022-23) won 2<sup>nd</sup> prize in Music Bhajan at GTU zone 5, Youth Fest.



## Training and Placement

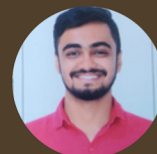
**Jigar Adhvaryu**  
Design Engineer at  
**ScaleFlux**



**Samhita Maddali**  
Graduate trainee  
Engineer at **AM/NS**



**Jeet Jaiswal**  
Assistant System  
Engineer-Trainee at  
**TCS**



**Harshini Sistu**  
Graduate trainee  
Engineer at  
**AM/NS**



**Rutvik Sojitra**  
Associate Engineer at  
**einfochip private  
Ltd.**



**Sejal Sureka**  
Associate Engineer at  
**einfochip private Ltd.**



**"Intelligence plus character , that is the goal of true education."**

**-Martin Luther King Jr**