



# K.S.INSTITUTE OF TECHNOLOGY



(Affiliated to VTU Belagavi, Approved by AICTE, New Delhi & Accredited by NBA ,NAAC & IEI)

No. 14,Raghuvanahalli, Kanakapura Main Road, Bengaluru - 560109

Web :- [www.ksit.ac.in](http://www.ksit.ac.in) Email:- [principal@ksit.ac.in](mailto:principal@ksit.ac.in)

## DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

### IEEE KSIT SB PRESENTS

# 2023

# MOMENTUM

## VOLUME-8



# K. S. INSTITUTE OF TECHNOLOGY

## VISION

“To impart quality technical education with ethical values, employable skills and research to achieve excellence”.

## MISSION

- To attract and retain highly qualified, experienced & committed faculty.
- To create relevant infrastructure.
- Network with industry & premier institutions to encourage emergence of new ideas by providing research & development facilities to strive for academic excellence.
- To inculcate the professional & ethical values among young students with employable skills & knowledge acquired to transform the society



# DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

## VISION

“To achieve excellence in academics and research in Electronics & Communication Engineering to meet societal need”.

## MISSION

- To impart quality technical education with the relevant technologies to produce industry ready engineers with ethical values.
- To enrich experiential learning through active involvement in professional clubs & societies.
- To promote industry-institute collaborations for research & development.



# CONTENTS

- MESSAGE FROM CEO
- MESSAGE FROM PRINCIPAL
- MESSAGE FROM THE HOD
- MESSAGE FROM BRANCH COUNSELOR
- MESSAGE FROM STUDENT CHAIR
- ABOUT THE STUDENT BRANCH
- EVENTS
- EXECOM





# MESSAGE FROM THE CEO

Professional personality and character develops through active participation in professional bodies. This brings together the knowledge imparted in the classroom and the experiential learning that takes place through field surveys and visits. Listening to practitioners of technology expose the students to new frontiers through seminars, conferences, workshops etc., and help the academia to keep abreast of all the developments in the field of research being carried out in Universities, R&D of industry and other organizations. This job of connecting the students the world over is being done by IEEE, that is an international professional body that effectively connects all the stakeholders.

The Student Chapter of IEEE at KSIT is a very proactive one that is catering to the learning needs of its' members. It is creating a wonderful platform that provides many opportunities for the students to have a real exposure and holistic learning that makes them more confident to take on the professional challenges. Their dedication and commitment to the cause of learning and knowledge proliferation is commendable.

I would like to congratulate both WIE & IEEE at KSIT for their active involvement and enthusiasm in bringing out this 7th Volume of IEEE magazine "MOMENTUM".

My best wishes to the wonderful editorial team.



- DR K. V. A. BALAJI,  
C E O,  
K S GROUP OF INSTITUTION.

# MESSAGE FROM THE PRINCIPAL

I Congratulate the IEEE student branch & WIE affinity group of KSIT for all the technical and non-technical events organized in the college. The IEEE student branch at KSIT is very active and has created platform for all the IEEE members & participants to showcase their talents. I am very Proud of WIE & IEEE KSIT student branch for their active involvement in releasing 7th Volume of IEEE magazine “MOMENTUM”. I would like to encourage the entire team to maintain their standards high through their good work.

My Best wishes to the entire team.



**- DR. DILIP KUMAR K  
PRINCIPAL & DIRECTOR  
K. S. INSTITUTE OF TECHNOLOGY**

# MESSAGE FROM THE HOD



I would like to appreciate the efforts of IEEE editorial team & congratulate for their excellent team work in showcasing & summarizing the talent, achievements and mile stones achieved by our students through the IEEE newsletter. KSIT IEEE student branch provides platform for all our students to exhibit their talent both in curricular and extracurricular activities. We believe in the overall personality development of students. We in IEEE student branch kindle innovative & design thinking & mould them to be good leaders.

Our IEEE student branch believes in the quotes “Intelligence plus character-that is the goal of true education & Key for success.”



**-DR. P.N.SUDHA**  
**HOD, DEPT OF ECE**  
**K.S.INTITUTE OF TECHNOLOGY**



# MESSAGE FROM BRANCH COUNSELOR

It is a tremendous responsibility and also a great honor and privilege to serve the IEEE KSIT student branch as Branch counselor. Every year, with much joy and anticipation we celebrate the launch of IEEE newsletter. IEEE is the world's largest technical professional organization dedicated to advancing technology for the benefit of humanity. At KSIT, IEEE student branch along with WIE (Women in Engineering) affinity group and signal Processing society is formed with the quest of achieving our technical and professional goals with IEEE's mission and vision. And most importantly encourage our students to contribute to real world problems. It was an honor to receive Best small student branch award from Bangalore section in the past.

As a branch counselor, I have witnessed the student's interest and enthusiasm to explore the engineering world and to my opinion IEEE is the best platform to guide and satisfy them. Workshops in popular areas, IEEE Day celebrations, Valedictory, Technical talk, Women's Day celebration and a wide spectrum of events reached IEEE members and non members. The student members of our branch have done excellent job with highest order of energy and interest. Hope to move on with the same pace with more sharp edge towards excellence and wider reach. I heartily invite you all to extend your support and join us in all the activities related to IEEE at our KSIT student branch and contribute to better humanity. Wish you continued health and safety



**-MRS. BHARGAVI ANANTH  
BRANCH COUNCELLOR**

# MESSAGE FROM STUDENT CHAIR

Before becoming the IEEE Chair for the year 2022-23, I was the WIE treasurer during my third year of engineering. Being in IEEE made me realize the importance to team work, time management and taking up responsibilities. Apart from soft skills, I was able to learn more about new technologies and researches around the globe through IEEE Xplore.

From helping organize events to planning and executing events, IEEE has taught me team management and organizational skills.

I would like to thank my staff Execom for guiding me throughout the year. I would like to thank my fellow Execom members for co operating with me in making every event a grand success. I would extend my thanks to the management of K.S.Institute of Technology for giving us an oppurtunity and supporting us to conduct various events.



**-GAYATHRI.P.K**  
**IEEE CHAIR**



# ABOUT THE STUDENT BRANCH

- The IEEE Student Branch was inaugurated in KSIT in the year 2002. The branch aspires to enrich the students of KSIT with the latest developments in various fields of technology and research developments. IEEE KSIT SB along with its WIE Entity and IEEE KSIT SPS conduct various technical and semi-technical events to ensure that the students' competency levels are enhanced to meet the required standards in today's industry. IEEE KSIT strives to invigorate the experience of organization and participation in the students through events that are conducted through the year. INNOVACEEEA is the Mega event conducted by the student branch having participants from various colleges. IEEE KSIT along with its WIE Entity conducted a 5K MARATHON with the theme "We Run, You Learn" in the year 2019 which had 200 plus participants. The SB also conducted an online programming challenge in the year 2020 "CODE\ n WIN 1.0" which had about 500 participants





# EVENTS

# IEEE DAY CELEBRATION

IEEE Execom gathered for the first meeting on 7th October 2022, which was graced by Dr.P.N Sudha, Professor and Head, Department of Electronics and Communication Engineering. This occasion was presided by professors of the ECE department.

Dr. P N Sudha, Professor and Head, ECE, KSIT address Execom, focusing on the roles and conduct of being a part of the Execom. She also appreciated the IEEE Execom members for making it be an active part of the Organization and standing up to take up the responsibility to keep up the integrity of IEEE,KSIT. She mentioned about the benefits of being an IEEE member and the immense responsibility that come with it. Following this, on the occasion the first gathering of the Execom, with the graceful presence of all the Execom members and faculty members, the celebration cutting a cake.





# VALEDICTORY FUNCTION 2022



The valedictory function of IEEE KSIT was held on 29th October, 2022 from 3PM onwards in the ECE seminar hall. Dr. K V A Balaji, CEO of K S Group of Institution and Dr. Dilip Kumar K, Principal and Director of K S Institute of Technology and IEEE Execom members of the year 2021-22 presided over the function.

This was followed by a talk and presentation by Rithvik.P, Ex-Chair, IEEE, KSIT about the various events conducted in the year 2021-22. Following this, the 2021 IEEE execom members handed over the responsibilities to the current Execom members to move forward and lead the organization to a grand success.



Further, the 7th volume of the IEEE magazine, MOMENTUM was launched by the Principal and CEO sir.

Execom members for the year 2020-2021	Execom members for the year 2021-2021	Position handed over
Rithvik P	Gayathri PK	IEEE Chair
Naga Omkar	Kiran V Narayan	IEEE Vice Chair
Aqsa Aqeel	Ashritha	IEEE Secretary
P Sai Govardhan	Gandhamani	IEEE Treasurer
Sushmitha R	Disha Shivani	WIE Chair
Vandana K	Aditi Dubey	WIE Vice Chair
Shiva Shankar	Amshumanth	SPS Chair
Thanushree D	Uday	SPS Vice Chair
Bhoomika	Gayathri R Warriar	SPS Secretary

# SAARANG

IEEE KSIT, WIE KSIT and SPS KSIT in association with Department of Electronics and Communication organized IEEE Mega event “SAARANG” on 26 November 2022.

Hod of electronics and communication, Dr. PN Sudha inaugurated the event and welcomed all the participants and wished them best for participating.

About 56 teams each of 3 members participated in the event. The event was divided into three phases. The first phase was the QUALIFIER ROUNDS it included three rounds.

Points from all the rounds were considered to decide the qualifying teams for the next phase.



The first round was “WORDPLAY” , it was a crossword round held at the classrooms, there were about 25 questions to be answered by participants. The event went for an about an hour and 30 minutes from 9:30 -11:00 am.



The second round was “CONNECTIONS” which was a memory based game where the participants had to guess the name of the movies which will be displayed as pictures clues. Each team was given with 5 movies of different languages. the team that takes the least time was placed first.

And the third round was “BACK 2 BACK” , here the participants had to guess the letters written at the back of the person and subsequently form a word. The team to identify the most number of letters correctly was ranked first . All the registered participants played upto the third round. The qualified teams from the back 2 back entered the final rounds. The teams which were qualifying for the next rounds were announced on the KSIT IEEE Instagram page.







The first final round was “HOPSCOTCH”. Here, there are three rounds which are supposed to be faced by each of the members in the team. Each of the member of the team must walk through a particular painting which has the palm and footprints placed in a particular order. Each of the member of the team must move forward quickly and must complete the task as soon as possible.



The final round was “CLUEMINATI”, for which the top 4 teams were selected. This round was pumped up with a combination of clues hidden in different premises of the college. Four teams had Four different sets of clues and they were assigned with a guide to supervise them. The first team to find the treasure were the winner and the second team to find the treasure with the runner-ups.

The top two teams who reached the destination were awarded as the winner and the runners. The prize money was awarded by The principal and director, Dr. Dilip Kumar and CEO of KS Group of institutions , Dr. KVA Balaji. IEEE Certificates were given to all the participants.



# MOTIVATIONAL TALK BY Dr. GIRIBABU

On 29th November, 2022 IEEE KSIT SB conducted a talk on carrier and opportunity for higher studies by one of the alumni's of KSIT, Dr. G. Giribabu. The Principal and Director of KS Institute of Technology and Mr. Santosh Kumar Professor, ECE welcomed our guest.

Dr. G. Giribabu spoke about his Ph.D. research in developing methods and studies for human heart and its related viral infections and diseases using GPUs while driving. He also spoke about his passion for science, technology, and human experiences. He explained to the students the importance of basics and focusing on practical learning.





# RUN TIME ERROR & SKILL SERENADE

On 5th December, 2022 KSIT IEEE SB in association with CODING NINJAS conducted a coding contest RUN TIME ERROR and a placement assistance test SKILL SERENADE. More than 150 students participated in the event. Run time error was a coding contest which allowed the participants to explore their coding skills. They were given 3 real time problems and the students had to come up with solutions by coding in any language.



Skill serenade was nothing but a placement assessment test in which participants were provided with aptitude and coding questions. In this test the participants were given with ranks.

This event was of great help for the students to understand how a real placement test would be conducted and to differentiate between the normal coding and competitive coding. They also learnt to incorporate their analytical skill and problem solving techniques along with time management, as both the events were completely time based.



# WORKSHOP ON ROBOTICS AND AEROMODELLING

The Garut Aeromodelling club, in association with IEEE KSIT and Department of Electronics and Communication Engineering organized a two days' workshop on Robotics and Aeromodelling on 26th and 27th December, 2022. The event featured external trainers who instructed students on the principles of aeromodelling and robotics. Approximately 20 teams, each comprising of 40 members, took part in the workshop. The event was inaugurated by Mr. Christo and Dr. Dinesh in the ECE seminar hall at 9am, which was followed by the introduction of the external trainers by Srinivasan.M.

Nishanth.K is a highly qualified Embedded Systems Engineer working at Keysight Technologies.

V Ranjith Kumar is also an Embedded Systems Engineer and PCB Designer who is employed as Embedded Design Engineer in Cambrian Consultancy Centre and Industrial Research.

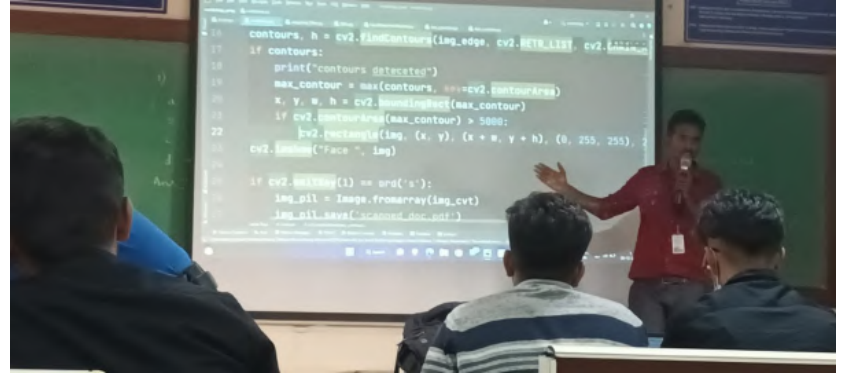


On the first day of the workshop, the attendees were introduced to the basics of aerodynamics and were guided in the construction of Hydro Rocket Models. The students then had the opportunity to launch their completed rockets in the college quadrangle. Winners were announced based on the height the rockets covered.

In the afternoon, participants received training on basics of Python and computer vision algorithms using Python and implemented mini projects with these techniques.



On the second day, further computer vision projects were demonstrated and the students were trained on the use of the Intel Galileo Board to build robotics-related mini projects. They also received instructions on how to interface computer vision algorithms with the Intel Galileo Board.



The workshop provided students with a good hands-on experience in applying these techniques to real-world scenarios. The workshop was a great success, with students gaining valuable hands-on experience in the field of Robotics and Aeromodelling. The ability to learn and apply new techniques such as image processing, edge detection, feature recognition and others, will be beneficial for the students in their mini projects and final year engineering projects. It was great to hear that the students enjoyed the workshop and had a positive feedback, such as – experiencing fun and interactive learning, having hands-on experience, and having the opportunity to launch their own rocket models. This type of positive feedback highlights the success of the workshop and the dedication of the trainers and organizers



# WOMEN'S DAY CELEBRATION

On 8th March, 2023 IEEE KSIT SB along with the department of Electronics and Communication conducted Guest talk on the occasion of Women's Day. The guest for the day was Mrs Kripa Venkatachalam. The talk was hosted by Amulya and the guest was introduced by Gagana Sindhu. The principal Dr K Dilip Kumar handed over a sampling to the guest



The theme for 2023 women's day was "Embrace Equity". The guest spoke about her journey in the VLSI field and the hardships that she had to face as a woman. She encouraged women to ask more questions and not let the male patriarchy stop them from achieving their dreams. She spoke about progress that has been made towards gender equality and to acknowledge the work that still needs to be done. She reminded us of the vital role the women play in our society.





On 8th March,2023 IEEE KSIT SB along with the department of Electronics and Communication celebrated the women's day through some fun games and events for the female faculty.

The first round was the rangoli competition conducted in Mechanical Department .There were 16 participants. The participants had to make vibrant rangolis . The criteria for selecting the winner area,colours and complexity. The winner was Ms Kavya from department of CSE and runner was Mrs Gangalakshmi from ECE.



The second round was cooking without fire .It was conducted in teams of 2 There were 12 teams .Each participant had to prepare a starter,dessert and a drink . The team had to incur a secret ingredient in any one of the dishes.The winner was Ms Shruthi and Ms Ramya from ECE and the runner was Ms Renuka and Ms Lakshmi from Applied Science Department



The third round was Minute to Win it which was played in a team of 2.It had 4 rounds with 3 qualifying round and 1 finale round.The winners were Ms Mamata and Ms Pragati from Applied science and the runner up was Ms Shantha and Ms Rekha from ECE .



The last round was The Ramp Walk there were 10 participants. The theme for the ramp walk was "CONTRAST". The winner was Mrs Kavya from ECE and the runner was Sushma from CSE. The principal Dr Dilip Kumar and the CEO Dr K V A Balaji distributed the prizes for the winner and runner ups.



# INDUSTRIAL VISIT I



Department Electronics and communication under IETE student's forum, IEEE and ISTE organized one day industrial visit for 3rdSemester students along with faculty members on "Bangalore Tech summit-2022" at Bangalore palace. This visit was mainly focused to understand about the industries which were existing in the city according to the branch.

The students were able to get an idea how exactly the organization works on the given project. By this industrial visit we could even get information about the Government Undertaking companies. There were many interesting topics such as 5G transmission without using wires, about drones, about the radar system used in the military, the upcoming government projects to develop the cities. The tech summit was divided into 2 sections 1. Familiar organization 2. startup companies



In the familiar organization they explained how exactly a team would be working for a project and what are all the outcomes of the project. They were only concerned about developing the cities and doing welfare In the startup companies their ideas were totally different they were working for well-being of the society and to get the solution for the problems in a society in a cheaper cost.



# INDUSTRIAL VISIT II



Department Electronics and communication under IETE student's forum, IEEE organized one day industrial visit for 7th Semester ECE students along with faculty members to "solar photo voltaic plant", Shivanasamudram, Malavalli on 16/12/2022 permitted by Karnataka Power Corporation Ltd. There are total 67 students and five staff members were present during industrial visit.

The historic site of Shivanasamudra, which has Asia's first hydroelectric station, is set to become a hub of solar power as Karnataka Power Corporation Ltd. (KPCL) is in the process of commissioning a 10 MW grid-connected solar power plant.



Students were given information about the technical aspects of solar power generation and supply. This particular solar power plant supplies power to half the Mysore, Kollegal, and other two Taluks. One panel consists of 72 cells with internal series and parallel connections. The structures are earthed. The installed solar PV power plant at the Shivanasamudra site would use approximately 50 acres of land. The installed solar photovoltaic power plant will be having a rating of 10MW and would be connected to the grid. There are two plants Plant A which produces 5MW and plant B which produces 3MW of power.

# IISC VISIT Bangalore

IEEE KSIT SB students got an opportunity to visit IISC campus on 16th Jan 2023 for IEEE SPS India Conclave. Where Prof. Athina Petropulu ,president , IEEE SPS talked on opportunities in signal processing society and promising future technologies. The event was hosted by SPS Bangalore Chapter EXECOM members. Students got an opportunity to explore existing opportunities in SPS and were able to clarify their queries directly with Prof. Athina Petropulu.



Prof. Athina Petropulu also talked about how women empowerment was important for further growth and also stated about how dedication, perseverance are key factors for one to become successful in a Technical field.

No of participants: 25 students from IEEE KSIT SB





# PROJECT EXHIBITION

Department of Electronics and communication Engineering organized the final year project exhibition on 28th April, 2023. The chief guests for the exhibition were Dr.Siddalingappa Gouda Biradar and Dr. Ajjaiah.H.M. Each project were displayed in the laboratories and the chief guests visited each and every team, interacting with the students and getting to know more about their projects.

The teams explained about their projects and explained the objectives, methodology, applications and future scope of their projects. All the projects received excellent remarks and the winners and runners were announced at the end of the paper presentation.



# STAFF EXECOM



**Mrs. BHARGAVI ANANTH**  
**BRANCH COUNCELLOR**



**MR. SANTHOSH KUMAR**  
**IEEE CHAIR**



**Dr. P.N.SUDHA**  
**WIE CHAIR**



**Mrs. SANGEETHA V**  
**WIE MENTOR**



**Dr. SUDARSHAN B**  
**IEEE MENTOR**

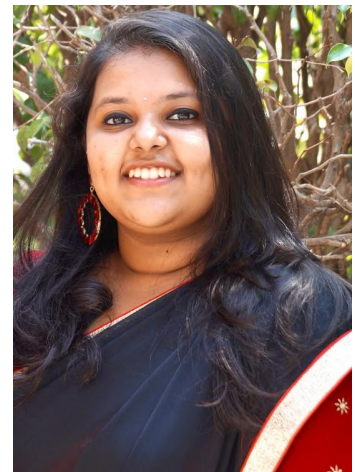
# STUDENT EXECOM IEEE



**GAYATHRI.P.K**  
**IEEE CHAIR**



**KIRAN.V.NARAYAN**  
**IEEE VICE CHAIR**



**ASHRITHA.R**  
**IEEE SECRETARY**



**GANDHAMANI.C.M**  
**IEEE TREASURER**



# STUDENT EXECOM WIE



**DISHA SHIVANI**  
**WIE CHAIR**



**ADITI DUBEY**  
**WIE VICE CHAIR**



**R.J.SHRIYA**  
**WIE SECRETARY**



**AMULYA.R**  
**DEPUTY SECRETARY**



# STUDENT EXECOM SPS



**UDAY**  
**SPS VICE CHAIR**



**AMSHUMANTH**  
**SPS CHAIR**



**GAYATHRI.R.WARRIER**  
**SPS SECRETARY**



# **SIGNATURES**

The background of the page is composed of several overlapping diamond shapes (squares rotated 45 degrees) in various shades of blue and purple. The colors range from a light, pale blue to a deep, dark purple. The diamonds are arranged in a pattern that creates a sense of depth and movement, with some overlapping others. The overall effect is a modern, geometric aesthetic.



**KSIT**  
K S INSTITUTE OF TECHNOLOGY

- FOLLOW US ON INSTAGRAM  
IEEE\_KSIT

