AUG 2023-JAN 2024

BEARYS INSTITUTE OF TECHNOLOGY

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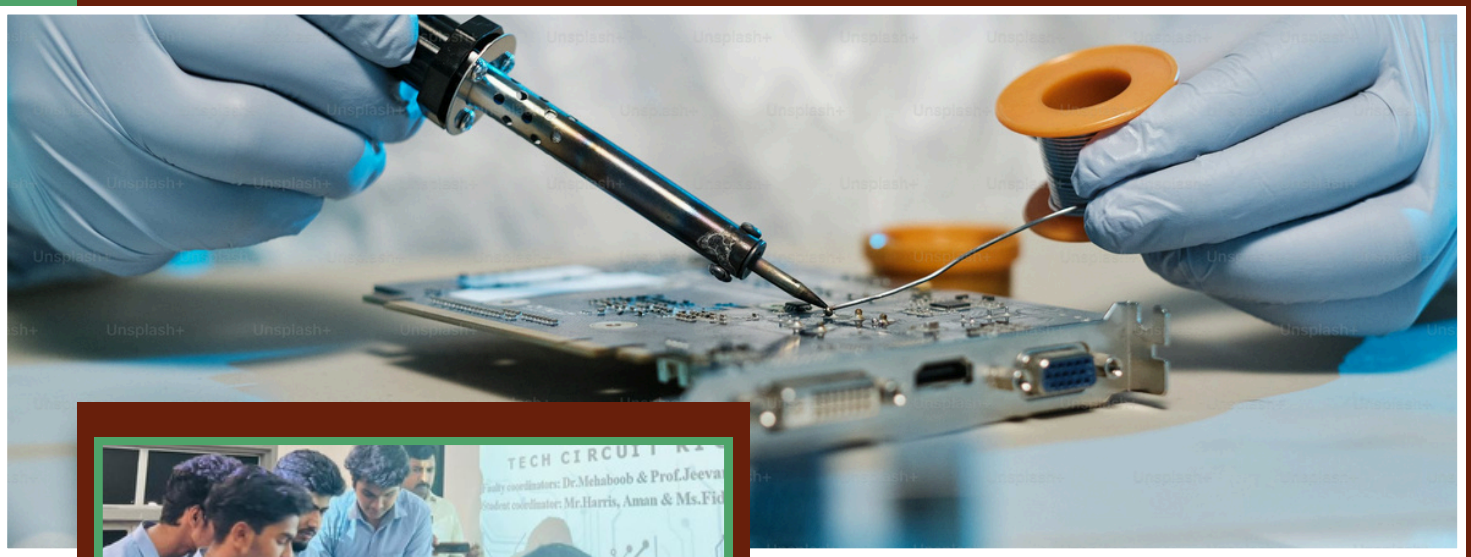


IN FOCUS

VISION

To be recognized by the world at large as a full-fledged department offering quality technical education in the field of Electronics and Communication Engineering with focus on research and catering to the needs of the environment and society.

MISSION

1.To deliver outstanding education by continuously enhancing curriculum and fostering collaboration with industry leaders.

2.To nurture the spirit of innovation and creativity in niche areas of technology among faculty and students by providing state-of-art research facilities.

3.To provide ethical and value- based education by emphasizing multi-disciplinary activities to address the societal needs and environmental sustainability.

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

VISION :

To be a center of excellence in Electronics and Communication Engineering, advancing research, innovation, ethical practice, and sustainable solutions for societal transformation

MISSION :

1. Foster innovation and research in Electronics and Communication Engineering, to create sustainable solutions addressing real-world and technological challenges.
2. Inculcate technical excellence and ethical values to develop competent graduates who contribute as professionals and leaders.
3. Promote industry collaboration and community engagement to ensure inclusive development and environmentally conscious engineering practices.

PROGRAM OBJECTIVES

1.Engineering Knowledge: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialisation to the solution of complex engineering problems.

2.Problem analysis: Identify, formulate, research literature, and analyse complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.

3.Design/ Development of Solutions: Design solutions for complex engineering problems and design system components or processes that meet specified needs with appropriate consideration for public health and safety, cultural, societal and environmental considerations.

4.Conduct investigations of complex problems: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.

5.Modern Tool Usage: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modelling to complex engineering activities with an understanding of the limitations.

6.The Engineer and Society: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal, and cultural issues and the consequent responsibilities relevant to the professional engineering practice.

7.Environment and Sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of need for sustainable development.

8.Ethics : Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.

9.Individual and Team Work : Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.

10.Communication: Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.

11.Project Management and Finance : Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.

12. Life-long learning : Recognise the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

PROGRAM SPECIFIC OBJECTIVES (PSOS)

1. Professional IT development and problem solving skills.

2. Preparing graduands for higher education and competitive exams.

3. Successful Career and Entrepreneurship.

Message from HOD

Dear Students, Faculty Members, and Readers,
It is a pleasure to present the ECE Department Newsletter for the academic year 2023–2024 of Bearys Institute of Technology. This newsletter highlights the academic activities, achievements, and initiatives of the department during the year.
The Department of Electronics and Communication Engineering at BIT continues to remain committed to academic excellence, innovation, and skill development. Our focus is on equipping students with strong fundamentals, practical exposure, and industry-relevant competencies to address evolving technological challenges.
I congratulate our students for their accomplishments and appreciate the dedicated efforts of our faculty members in teaching, mentoring, and research.
I also extend my sincere thanks to the editorial team for their valuable contribution in bringing out this newsletter.
Let us continue to work together with enthusiasm and dedication to make every academic year productive and successful.
With best wishes,

Dr. Abdullah Gubbi
Head of the Department – ECE

Message from Faculty Editor

Dear Readers,

I am delighted to present the Department Newsletter for the academic year 2023–2024 of Bearys Institute of Technology, Mangalore. This edition reflects the dedication, creativity, and achievements of our students and faculty over the past year.

Throughout the year, the department has witnessed significant academic and co-curricular activities, innovative projects, and collaborative efforts that highlight our commitment to excellence. This newsletter serves as a record of those meaningful contributions and milestones.

I sincerely thank all the contributors and members of the editorial team for their enthusiasm, teamwork, and efforts in bringing out this publication. I hope this newsletter motivates our readers to continue striving for excellence and innovation.

With best wishes,

Prof.Nikitha

Faculty – Department of ECE

Message from Student Editor

Dear Readers

We are pleased to present the ECE Department Newsletter for the academic year 2023–2024 of Bearys Institute of Technology. This newsletter captures the memorable experiences, learning opportunities, and achievements of students and faculty throughout the year.

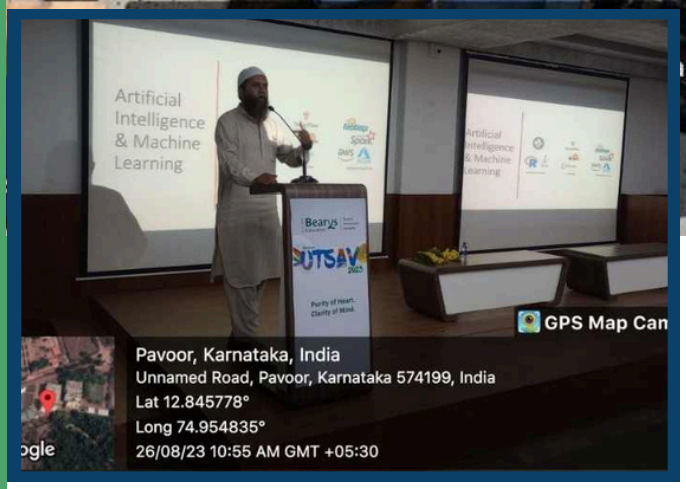
The academic year has been enriching, filled with technical events, workshops, projects, and various activities that have contributed to our overall growth. The continuous support and guidance from our faculty members have been instrumental in helping us enhance our knowledge, skills, and confidence.

This newsletter is a reflection of our collective efforts, creativity, and teamwork. We express our sincere gratitude to all students, faculty members, and the editorial team for their valuable contributions in making this publication possible

Harris Khan, Huzaina

BE Students – Department of ECE

PROSPERITY AND PERSEVERANCE: UNVEILING THE PATH TO SUCCESS IN THE EVER-EVOLVING IT INDUSTRY.



The Bearys Institute of Technology, in collaboration with the IEEE BIT Student Branch, hosted an invited talk titled "Prosperity and Perseverance: Unveiling the Path to Success in the Ever-Evolving IT Industry" on August 26th, 2023, from 9:30 AM to 12:30 PM.

The event aimed to shed light on the dynamic IT landscape and guide aspiring professionals toward success. The resource persons included:

– Syed Ameen Murtuza – Product Designer at Treflo & dexponent.xyz

– Tabrez Humayun – System Engineer at Infosys

– Saud Manzoor Khan – Design Engineer at Western Digital

– Abdul Khalik – Co-Founder of TechSculpt Innovations

These professionals shared their journeys, offering insights into essential skills, emerging technologies, and industry tools such as AWS, Azure, and Web 3.0. The event encouraged networking and direct interaction between students and industry experts.

The session opened with a welcome address by Dr. Abdullah Gubbi, IEEE Branch Counsellor, followed by thought-provoking presentations and an engaging Q&A segment. The program concluded with a vote of thanks by Ms. Huda from the CSE department.

INTERNATIONAL EXPERT DR. SA KHAN PRESENTS GROUNDBREAKING RESEARCH ON PASSIVE CONTROL USING RIBS

In a significant gathering of faculty and enthusiasts at BIT's National Seminar Hall, sponsored by IEEE Mangalore sub-section and Institution's Innovation Council(IIC), Dr. SA Khan from IIUM Malaysia, an esteemed international authority in the field of aerospace engineering, was warmly welcomed by Dr. Vasanth Kumar, Head of the Mechanical Engineering Department.

Dr. Khan presented a talk on "Numerical and Experimental Study of Passive Control in the Form of Ribs at Sonic and Supersonic Mach Numbers with the Application of Neural Networks."

The research delved into the intriguing realm of aerospace engineering, focusing on the utilization of passive control mechanisms involving ribs at both sonic and supersonic Mach numbers. Dr. Khan's presentation captivated the audience as he discussed the extensive experimental investigation he had undertaken. This investigation aimed to unravel the effects of passive control while using ribs of varying diameters, specifically 6 mm, 8 mm, and 10 mm.

The event commenced punctually at 10:30 AM on September 22, 2023, and drew a diverse audience of academicians, researchers, and students eager to delve into the complex world of aerospace engineering and fluid mechanics. Dr. Khan's presentation showcased the extensive knowledge and innovative thinking that have propelled him to international acclaim in his field.

His application of neural networks to enhance the understanding of passive control mechanisms in aerospace engineering added a cutting-edge dimension to the research, making it of particular interest to the academic and industrial communities alike. The event was coordinated by Dr. Imran Mokashi of the Mechanical Engineering Department.

BIT MANGALORE HOSTS INSIGHTFUL EVENT ON BIG DATA ANALYTICS AND MACHINE LEARNING FOR STUDENTS

Bangalore Institute of Technology (BIT), Mangalore, recently organized a knowledge-packed event featuring distinguished experts in data-driven technologies. Dr. Hatture from Nagarjuna College of Engineering and Technology, Bengaluru, delivered an enthralling discourse on Big Data Analytics, offering attendees valuable insights into data analysis and interpretation.

Following this, Dr. Rashmi P. Karchi, also from Nagarjuna College of Engineering and Technology, captivated the audience with a deep dive into Machine Learning Techniques, exploring the latest advancements and practical applications in the field.

Dr. Abdullah Gubbi, the IEEE Branch Counselor of BIT Mangalore, ensured the event proceeded seamlessly. The program concluded with a vote of thanks by Prof. Najma from the Department of Computer Science and Engineering (CSE), who expressed gratitude to the speakers, organizers, and participants.

The event served as an enriching platform for students and faculty to expand their knowledge in the domains of Big Data Analytics and Machine Learning.

BIT MANGALORE HOSTS INSIGHTFUL EVENT ON BIG DATA ANALYTICS AND MACHINE LEARNING FOR STUDENTS

Bearys Institute of Technology, in partnership with the IEEE Student Branch, hosted an event titled “Cyber Security and Cyber Crime Awareness Program” on October 20th, 2023.

The event, centered around the theme of cybersecurity, captivated the attention of students and faculty members. Attendees were eager to delve into the world of cyber threats and defenses. Mohammed Sheik Nihal, CEO of EyeQ Dot Net Pvt Ltd, a seasoned cybersecurity expert, took the lead in the discussions, offering insights into the current challenges and solutions in the field.

The speaker covered a plethora of cybersecurity aspects, presenting strategies to safeguard digital assets and elaborating on emerging threats. The audience was treated to real-world case studies that underscored the critical importance of awareness in countering cybercrime.

The program commenced with a warm welcome address by Dr. Abdullah Gubbi, Branch Counselor of IEEE and Head of the ECE department. Ms. Salma Nadaf, a student from the ECE department, skillfully managed the proceedings as the Master of Ceremony.

To conclude the program, Dr. Vinutha, Head of the Physics department, delivered the vote of thanks, expressing gratitude to the speakers, organizers, and attendees for making the event a success.

BIT ORGANIZES EVENT TITLED "INTERVIEW MASTERY" FOR STUDENTS

Mangaluru: Bearys Institute of Technology in association with BIT IEEE student branch organized the event titled "Interview Mastery: Igniting Confidence and Enthusiasm in Students." On 10th Nov 2023. Engineering and BCA students gathered with a shared objective: mastering the art of interviews, a critical step towards their professional careers.

The event started with a welcome address by Dr. Abdullah Gubbi, Head of the ECE department. He also mentioned it was the twelth event under the banner of IEEE student branch of this year. Diana Bangera, HR at Novigo Solutions, the resourse person, brought her extensive expertise to the audience, imparting invaluable insights into navigating the complex terrain of interviews.

Her address was a mind opener of guidance, emphasizing ways to transform interview challenges into opportunities for growth and success.

The event was mastered by Salma Nadaf, a student from the ECE department, discussions flowed seamlessly, fostering an atmosphere of engagement and shared learning.

The emphasis wasn't solely on theoretical knowledge but on its practical application. Students were encouraged to participate actively, pose questions, and absorb the wisdom shared by the speaker.

Mashooda from the ECE department, concluded the event with a vote of thanks.

THE ELECTRONICS AND COMMUNICATION ENGINEERING STUDENT ASSOCIATION, BEASPIRE, ORCHESTRATED A SPECTACULAR EVENT KNOWN AS “SPARKFEST”

The Electronics and Communication Engineering student association, BEASPIRE, orchestrated a spectacular event known as “SparkFest” – a technical circuit rig-up designed exclusively for ECE students.

The event, which took place on the 31st of January 2023 at 2:00 PM, saw active participation from students enrolled in the 3rd and 5th Semesters.

A profound sense of technical skill and innovation infused the competition, as students showcased their skills in circuitry. The 1st prize was secured by Mr. Hyder, Nihal, and Numan for their exceptional work on the “Vehicle Parking System.” Meanwhile, the 2nd prize was claimed by Mr. Mahroof, Safwan, Naufal, and Shihabuddin, who impressed with their project on the “Theft Detection System using Laser and LDR.” In recognition of their outstanding achievements, the winners of the 1st and 2nd positions were honored with cash prizes.

The event was coordinated by Dr. Mehboob and Prof. Jeevan, whose guidance contributed to the seamless execution of SparkFest. Additionally, the invaluable contributions of student coordinators, Mr. Harris, Aman, and Ms. Fida from the 5th Semester, played a pivotal role in ensuring the success of this technical extravaganza.

"INNOBYTE-23" ONE-DAY WORKSHOP ON IOT HELD AT BIT

BIT-IEEE student branch, in collaboration with IEEE MSS, hosted the "Innobytes-23" one-day Hands-on IoT workshop at the International Seminar Hall on December 4, 2023.

Dr. Abdullah Gubbi, the Branch Counselor of BIT-IEEE Student Branch, welcomed attendees and spoke about the workshop's objective of providing practical knowledge and hands-on experience in the field of the Internet of Things (IoT).

During his welcome address, Dr. Gubbi highlighted the importance of staying updated with technological advancements, particularly in the rapidly evolving landscape of IoT. He encouraged participants to capitalize on the learning opportunities presented by the workshop.

The keynote address was delivered by Dr. SI Manjur Basha, Principal of BIT-Mangalore, who provided insights into the transformative power of IoT across various industries, highlighting its potential to drive innovation.

Prof. Ashwini Holla, Chief Guest and IEEE Women in Engineering Chair Elect, was a notable presence at the event. She spoke about the benefits of IEEE membership, encouraging students to actively participate in competitions for skill enhancement.

Prof. Holla emphasized the role of organizations like IEEE in providing collaborative and knowledge-sharing environments.

Salma Nadaf, a student of Electronics and Communication Engineering, served as the Master of Ceremonies (MC) for the event. Prof. Umme Najma from the Computer Science and Engineering department delivered the vote of thanks, expressing gratitude to the speakers, organizers, and participants.

The workshop concluded at 4:30 PM in the Mobile Application Lab.

BIT'S ECE STUDENTS SHINED BRIGHT AT IIT MADRAS' CATERPILLAR AUTONOMY CHALLENGE ON 6TH JAN 2024

ECE students from BIT completed the model for the Caterpillar Autonomy Challenge on Jan 6th, 2024, at IIT Madras and won 3rd prize in Shastra.

Their model revolves around a space autonomous rover equipped with an array of sensors and advanced capabilities designed for strategic applications. Among its primary features is a sophisticated camera enabling vision and detection, allowing the rover to keenly observe its surroundings. Additionally, an ultrasonic sensor enables accurate distance measurement, crucial for autonomous navigation.

This rover prepared by Mr. Aadil, Mr. Rizwan, Mr. Arshak, Mr.Fayeem, Mr. Thahseen, and Mr. Nabeel of 5th semester ECE at BIT, Mangalore is further equipped with a versatile robotic arm, fitted with sensors and a camera, enabling it to take responsive actions upon detecting specific objects, thereby enhancing its capability to pick and place items in designated areas.

This autonomous rover serves the purpose of gathering intelligence and adeptly responding to diverse situations encountered.

Conclusion

As we conclude this edition of the ECE Department Newsletter, we take pride in reflecting on the accomplishments, innovations, and collective efforts that have shaped our journey throughout the year. From academic achievements and student projects to engaging events and collaborative initiatives, our department continues to grow with enthusiasm and purpose.

We express our heartfelt gratitude to our faculty, students, and all contributors for their dedication and support in making these successes possible. Their continuous efforts play a vital role in strengthening our academic and professional environment.

Let us remain connected, motivated, and committed as we move forward towards greater achievements in the coming academic years. Here's to continued learning, innovation, and excellence!

Harris Khan
Huzaina
Student Editor

Prof. Nikitha
Faculty Editor