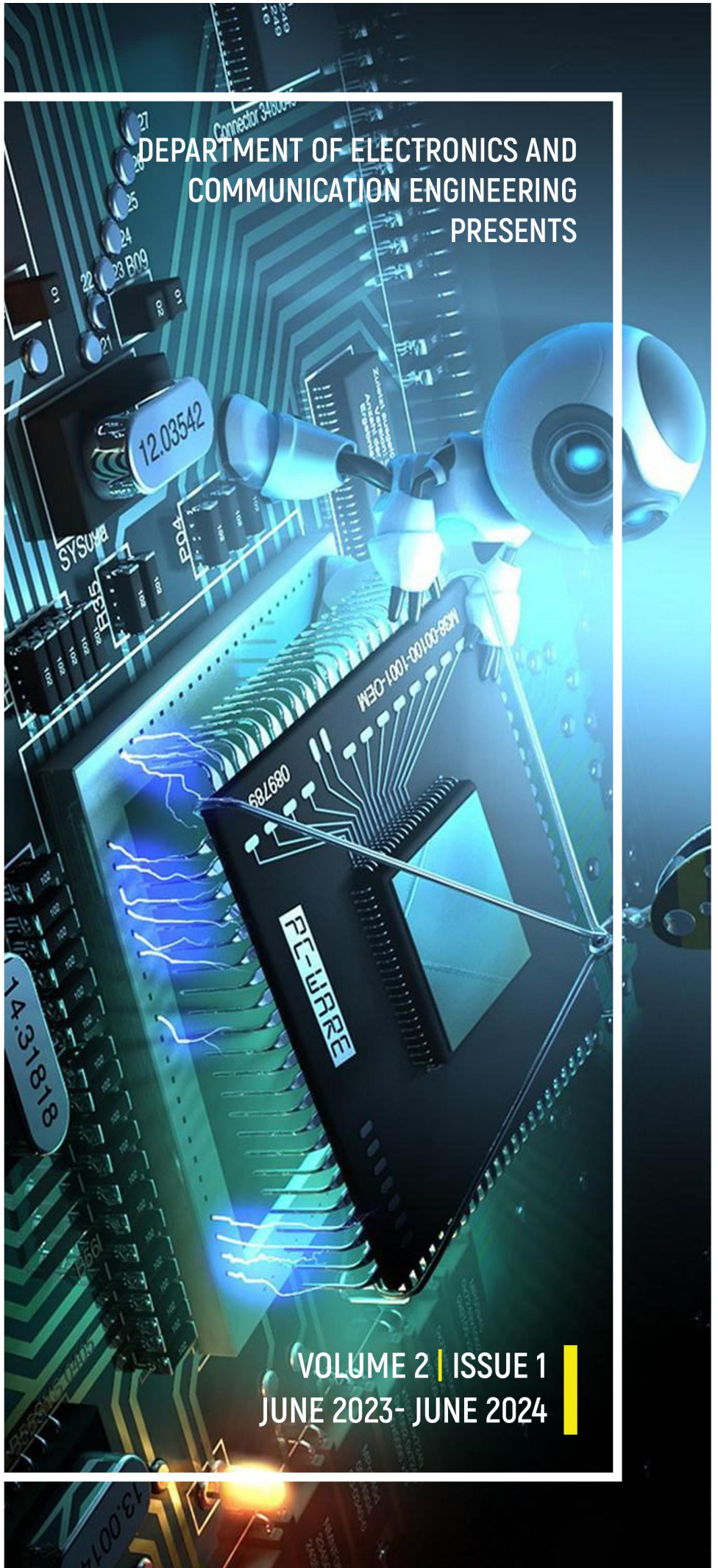


# ECE HERALD



DEPARTMENT OF ELECTRONICS AND  
COMMUNICATION ENGINEERING  
PRESENTS

VOLUME 2 | ISSUE 1  
JUNE 2023- JUNE 2024

WHERE CREATIVITY MEETS TECHNOLOGY

## VISION

- ◆ To produce professionally competent and ethically sound Electronics and Communication Engineers.

## MISSION

- ◆ Provide excellent infrastructure and lab facilities for quality education.
- ◆ Promote industry-academic interactions to keep up with technological advancements.
- ◆ Develop interpersonal skills among students through project-based and team-based learning.

## PROGRAM EDUCATIONAL OBJECTIVES (PEOs)

- ◆ Exemplify technical competence in designing, analyzing, testing and fabricating electronic circuits.
- ◆ Acquire leadership qualities, rapport, communication skills in the organization and adapt to changing professional and societal needs.
- ◆ Work effectively as individuals and as team members in multidisciplinary projects

## PROGRAM SPECIFIC OUTCOMES (PSOs)

- ◆ Define, design, implement, model, and test electronic circuits and systems that perform signal processing functions.
- ◆ Segregate and select appropriate technologies for implementation of a modern communication system.

## PROGRAM OUTCOMES (POs)

- ◆ **Engineering knowledge:** Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
- ◆ **Problem analysis:** Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
- ◆ **Design/development of solutions:** Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.
- ◆ **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.
- ◆ **Modern tool usage:** Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.
- ◆ **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.
- ◆ **Environment and sustainability:** Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.
- ◆ **Ethics:** Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
- ◆ **Individual and team work:** Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
- ◆ **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.
- ◆ **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.
- ◆ **Life-long learning:** Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

# EVENTS

## **CONVOCATION CEREMONY 2023**

◆ On September 9, 2023, St. Thomas College of Engineering and Technology hosted the Convocation Ceremony for the 2019-2023 batch. Chief Guest V P Balagangadharan, former space scientist of VSSC, delivered an inspiring keynote address. Anusree K of 2019-23 batch was recognized as the college topper during the event, and graduates were awarded their degrees, celebrating their academic achievements with family and faculty.



## **TWO-DAY WORKSHOP ON EMBEDDED SYSTEM DEVELOPMENT**

◆ On October 12-13, 2023, the Departments of Electronics and Communication Engineering and Mechanical Engineering, in collaboration with IEDC STM, hosted a two-day workshop on Embedded System Development. The workshop aimed to provide participants with a

comprehensive understanding of embedded systems, including their applications and practical aspects of design and programming. Mr. Kathiru Santhikumar, CEO of ThinkFotech Innovations, served as the resource person, bringing expert knowledge and industry experience to the sessions.



## **INAUGURATION OF IEEE STUDENT BRANCH AT STM**

◆ On December 7, 2023, the IEEE Student Branch of STM was officially inaugurated by Prof. Muhammed Kasim S, Chair of the IEEE Kerala Section. The event was highlighted by a technical talk delivered by Prof. Muhammed Kasim on IEEE standards. His insightful presentation provided valuable knowledge on the importance and application of IEEE standards in the field of engineering and technology.



## **PROJECT EXPO AT SREE SANKARA VIDYAPEETAM, MATTANUR**

◆ On December 7, 2023, our department participated in a project expo organized by Sree Sankara Vidyapeetam, Mattannur. Our students had the opportunity to showcase their innovative projects and interact with students from various schools in the region. This valuable experience allowed our students to share knowledge and learn from peers, broadening their understanding of the latest field trends.



## **EXPERT TALK ON "EXPLORING THE SCOPES OF VLSI DESIGN"**

◆ On March 23, 2024, the Electronics Department Association organized an expert talk titled "Exploring the Scopes of VLSI Design." Designed for S4, S6, and S8 ECE students, the session featured Mr. Sruthin Balachandran V V, Senior Physical Design Engineer at Quest Global Pvt. Ltd., Bangalore. Mr. Sruthin provided valuable insights into the field of VLSI design, offering a comprehensive overview of its current trends and future opportunities.

## **ONE-DAY WORKSHOP ON "STEPPING STONE TO ELECTRONIC AUTOMATION"**

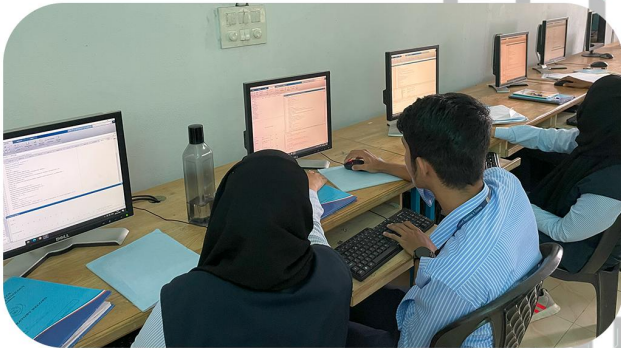
◆ On April 2, 2024, the Electronics Department Association hosted a one-day workshop titled "Stepping Stone to Electronic Automation" for second-year ECE students. Held in the Electronic Circuits Lab, the workshop was a collaborative effort involving 23 students and faculty members from the ECE Department. Resource persons Mr. Manu Thomas and Mr. Nivin V K, Assistant Professors in the ECE Department, guided participants through engaging and informative sessions, enhancing their understanding of electronic automation.



## **MASTERING MATLAB- A HANDS ON WORKSHOP FOR COMMUNICATION LAB APPLICATIONS**

◆ On April 30, 2024, the Department of Electronics and Communication Engineering conducted a specialized workshop titled "Mastering MATLAB: A

Hands-On Workshop for Communication Lab Applications." The session was handled by Dr. Anetha Mary Soman, Professor in ECE Department. This interactive workshop was designed to provide participants with practical skills and in-depth knowledge on utilizing MATLAB for communication lab applications, offering valuable hands-on experience in this crucial area of study.



## IGNITE 2K23

### **EXPERT TALK ON UNLOCKING THE POTENTIAL OF WIRELESS COMMUNICATION**

◆ On May 2, 2024, the Electronics Department Association of STM organized a captivating expert talk titled "Unlocking the Potential of Wireless Communication." The session was led by Dr. V. Vinod Kumar, a distinguished professor from the Electronics and Communication Engineering (ECE) Department at Government College of Engineering, Kannur. Tailored specifically for final-year ECE students, this insightful event aimed to deepen their knowledge and ignite enthusiasm for the dynamic field of wireless communication.





## National Level Techno-Cultural Fest

As part of XTASY 2k24 the following technical events were organised by the Department of Electronics and Communication Engineering

### **CIRCURE:**

**ANALYZE THE CIRCUIT, DETECT AND CORRECT ANY ERRORS**

◆ Participants were tasked with analyzing a provided circuit, identifying any errors, and rectifying any detected issues.



### **TECHNOTION:**

**TIME LIMITED IDEA-COLLECTION CAMPAIGN THAT FOCUSES ON A SPECIFIC TOPIC**

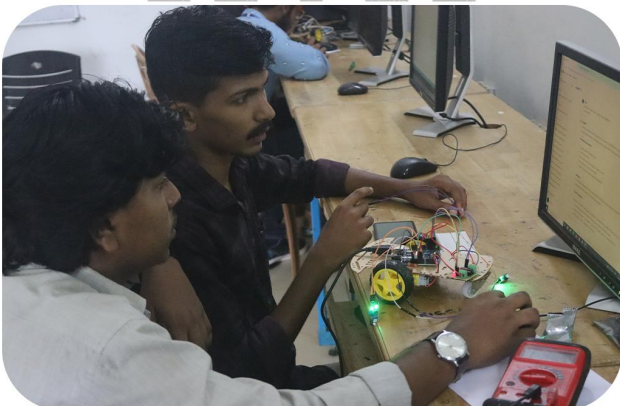
◆ Each participating team was assigned a topic in advance and invited to showcase their innovative ideas through a compelling presentation.



### **TRACKWHACK:**

**ASSEMBLE THE ROBO, WIN THE RACE**

◆ A contest called "TrackWhack" was held, where competitors were tasked with assembling designated parts to construct a robot, thus improving their technical expertise.



### **MELTDOWN:**

**ANALYZE THE CIRCUIT, DETECT AND CORRECT ANY ERRORS**

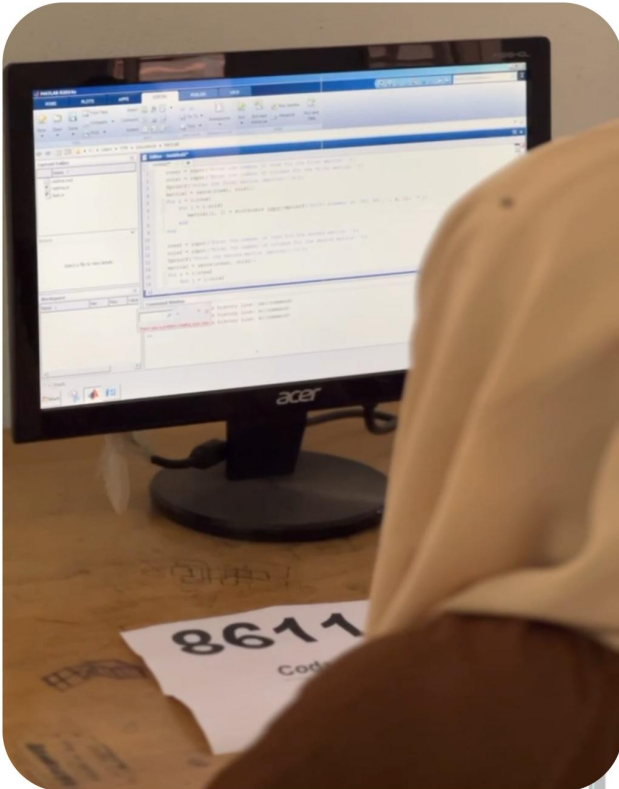
◆ Participants were invited to demonstrate their exceptional skills by joining electronic components through the artful technique of soldering.



## CODE MEND:

### FINDING AND FIXING ERRORS OR BUGS IN THE SOURCE CODE

◆ As a central highlight of XTASY'24, Codemend was held for students, challenging them to identify and resolve bugs within the source code



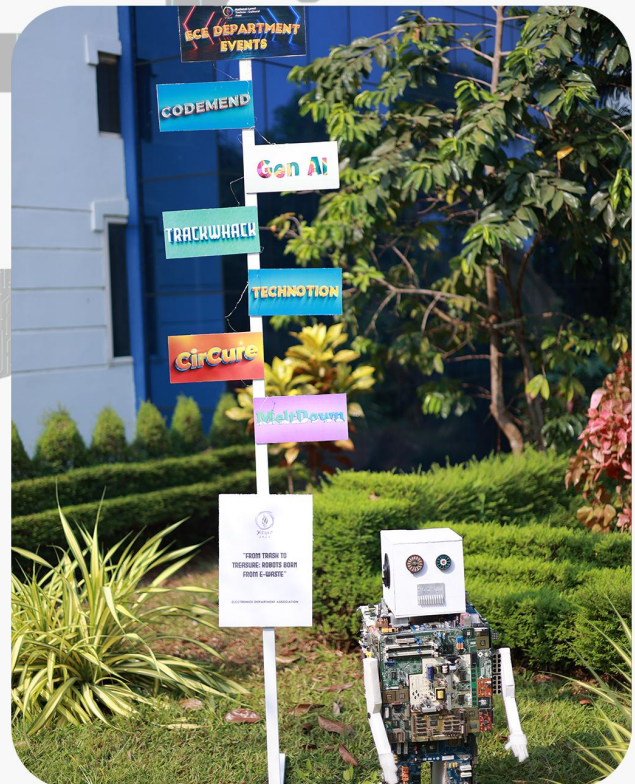
## INSTALLATIONS



## GEN-AI:

### TO THE UNKNOWN REALM

◆ On the final day of XTASY'24, our department hosted an insightful workshop led by Mr.KATHIRU SANTHIKUMAR (CEO,Thinfotech innovations). He provided a comprehensive overview of the highlights of Gen-AI and introduced students to the tools associated with this innovative technology.





# CULTURAL EVENTS



# STAFF ACHIEVEMENTS

- ◆ In June 2023, Anetha Mary Soman was awarded her PhD degree for her thesis titled "Investigation on Channel Estimation Techniques for Spatial Modulated Systems.
- ◆ Dr. Anetha Mary Soman has been selected as an approved research supervisor under KTU & an approved PhD co-supervisor at Manipal Academy of Higher Education.

## NPTEL

- ◆ Dr. Anetha Mary Soman & Mr. Nithin C. have successfully completed the NPTEL course Accreditation and Outcome Based Learning in Elite-Silver category.
- ◆ Mr. Manu Thomas has successfully completed the NPTEL course Analog Circuits in Elite-Silver category.
- ◆ Ms. Arsha C. Dinesh & Ms. Sreetha Sreedhar K. have successfully completed the NPTEL course NBA Accreditation and Teaching Learning in Engineering (NATE) in Elite category.
- ◆ Ms. Sreetha Sreedhar K. has successfully completed the NPTEL course Principles of Communication system-1 in Elite category.
- ◆ Ms. Sujisha P.P. has successfully completed the NPTEL course Teaching and Learning in Engineering (TALE) in Elite category.

## FDPs

- ◆ Mr. Manu Thomas, Mr. Nivin V. K & Ms. Sreetha Sreedhar K attended a 5-Day FDP on VLSI to system design – Silicon to end application approach, organized by AICTE, ARM Education and STMicroelectronics..

- ◆ Ms. Arsha C Dinesh, Ms. Sreetha Sreedhar K, Mr. Nivin V K & Mr. Manu Thomas attended a 3-Day FDP on Practical Aspects of Communication Engineering with Hands – on, organized by ECE Department, VAST.

- ◆ Ms. Arsha C Dinesh & Ms. Athira V attended a 5-Day FDP on Opportunities of Power electronics in Smart grid, renewable energy resources and electric vehicles, organized by EEE Department, SCMS Ernakulum.

- ◆ Dr. Anetha Mary Soman attended a 2-Day Workshop on NBA accreditation, organized by NIT Calicut as part of activities of the Margadarshan Scheme of the AICTE.

- ◆ Ms. Sujisha PP & Mr. Rahul VA attended a 5-Day FDP on Innovative Teaching and Learning Pedagogy jointly organized by World Innovators University, Research Foundation of India & RFI care.

## Paper Publications

- ◆ We are proud to recognize Dr. Anetha Mary Soman's contribution as a co-author in the research paper "Exploring Deep Learning Techniques in Skin Lesion Detection" presented at the 5th International Conference on Data Analytics and Management (ICDAM-2024), jointly organised by London Metropolitan University, London, UK in association with WSG University, Bydgoszcz, Poland, Europe, Portalegre Polytechnic University, Portugal, Europe, SGGW Management Institute & BPIT, GGSIPU, Delhi.

# STUDENT ACHIEVEMENTS

## PRE-EMINENCE IN NPTEL

The following students have successfully completed various NPTEL courses during the academic year 2023-24



Abhay Rithik



Anujith K



Erin Ruksheed



K Sana Fathima



Sheik Muhammed  
Sahad



K Gautham  
Krishna

## CANVAS CLASH

Poster designing competition  
organised by GEEKZONE



Navaneeth  
Narayanan  
(First)



Samanyu  
N Jills  
(Second)

## GAMES

Qualified for Interzonal Table Tennis  
tournament conducted by APJ Abdul  
Kalam Technological University



Muhammed Muaadh Farook

## EDITORIAL TEAM

Ms. Sreetha Sreedhar K (Asst. Prof)

Navaneeth Narayanan (S5 ECE)

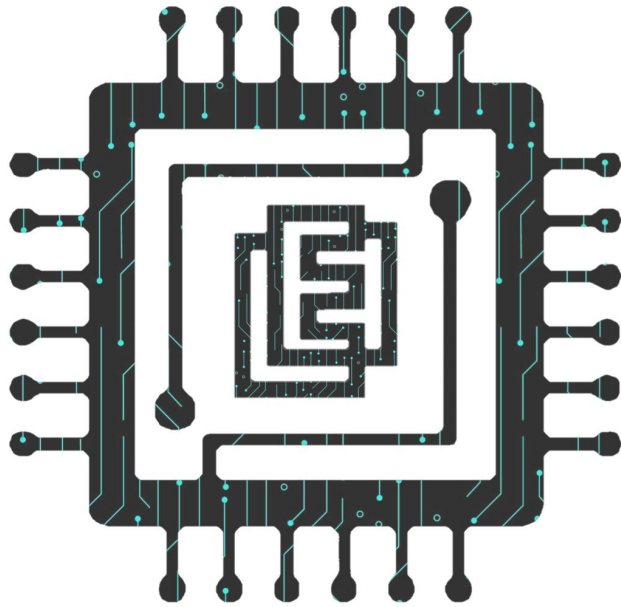
K Sana Fathima (S7 ECE)

Krishnendu S Nair (S5 ECE)

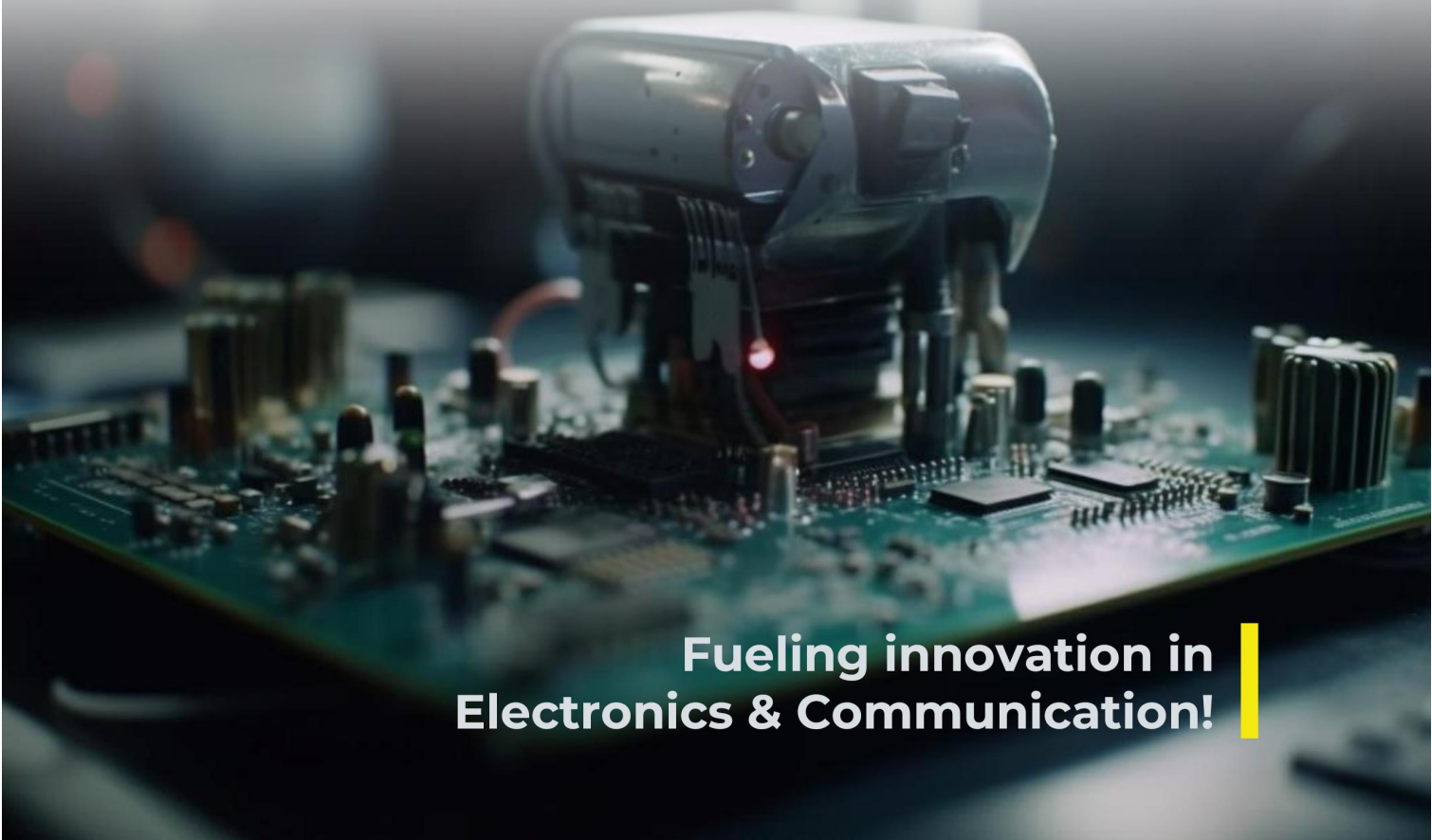
Abhay Rithik (S7 ECE)

ECE  
HERALD

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# IMPULSE



Fueling innovation in  
Electronics & Communication!