ELEKTRA

Newsletter of Electronics & Communication Engineering .

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July 2024

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ELEKTRA 2024

From the HOD's Desk

I am pleased to announce that the Department of Electronics and Communication Engineering is releasing its newsletter for the even semester of the academic year 2023-24, highlighting the various activities and accomplishments of our students. Our department strives to nurture confident professionals, well-prepared for the demands of the real-world work environment. With a dedicated team of highly qualified faculty members, we provide an excellent academic atmosphere that encourages students to enhance their technical skills and fosters a strong spirit of teamwork.



Prof Vinod G Head of the Department Department of Electronics & Communication Engineering

OUR VISION

To excel in the field of Electronics & Communication engineering by fostering persistent learning and research while instilling values and shaping socially responsible professionals.

OUR MISSION

1.To cultivate an inspiring learning atmosphere that empowers students to embark on challenging careers in the dynamic field of electronics and communication benefiting the society.

2.To enhance the students with a strong technical foundation to pursue higher education and research in the relevant fields, fostering a passion for life long learning and innovation.

3.To cultivate technical, ethical and sustainable practices for the welfare of the society.

PROGRAM EDUCATIONAL OBJECTIVES(PEOs)

To enable our graduates to apply sound technical knowledge acquired during their course to creatively solve technical problems in academic research and industrial sectors.

To inculcate technical and professional skills for pursuing postgraduate studies from reputed institutions in electronics, communication, and related engineering or managerial fields.

To equip our graduates with professional leadership qualities to coherently deliver in a team or to become a successful entrepreneurs with ethical and moral values for the betterment of the society.

PROGRAM SPECIFIC OUTCOMES(PSOs)

The ability to absorb and apply fundamental knowledge of core Electronics and Communication Engineering subject in the analysis, design and development of various types of electronic system as well as to interpret and synthesize the experimental data leading to valid conclusion.

Competence in using state of the art tools in Electronics and Communication Engineering, both software and hardware, for the design and analysis of different system in furtherance of research activities.

Ability to gain technological_insight for solving challenging problems in engineering systems especially in the area of Electronics and Telecommunication.

PROGRAM OUTCOMES

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, 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 researchbased 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.

PLACEMENTS

Tarento				14
TCS				13
Alstom			8	
Tata Elxsi			7	
Integrated		6		
Artech	3			
Poornam	3			
iWave	3			
Speridian	2			
CORIZO	2			
skolar	1			
zendblona	1			
PLANET SPARK	1			
SKILL WINNER	1			
Kalki Tech	1			
Accenture	1			
SANMINA	1			
Acmegrade	1			

ODD SEMESTER TOPPERS



Gopika G Krishnan



T R Nakul



Archana G



Salini K



Akshaya Krishna



P S Sudharsan



Anitta Joffy



Sreehari S

EVEN SEMESTER TOPPERS



Gopika G Krishnan S8 ECE-A



Akshaya Krishna S4 ECE-A



T R Nakul S8 ECE-B



P S Sudharsan S4 ECE-B



Archana G S6 ECE-A



Anitta Joffy S2 ECE-A



Nimia Das A S6 ECE-B



Padmapriya C J S2 ECE-B

Toppers of ECE



GOPIKA G KRISHNAN 9.85



TR NAKUL 9.76



SRIVANI SATHEESH 9.55



MD ADARSH 9.43



NANDANA PK 9.32



ABHISHEK MANOJ 9.27



MINNA MARIA 9.21



VARSHA 9.21



ASWAN 9.17



ARAVIND S 9.14



FAISA 9.06

<u>Gate Qualifiers</u>



SALINI C P AIR 1574



ABHISHEK MANOJ AIR 3689



ABHIJITH S AIR 3689



DILSHAD M SAGAR AIR 4224



DEERAJ AIR 4375



TR NAKUL AIR 6758



SHAZIA SHANAVAS AIR 8619

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M ARATHI KRISHNAN AIR 5643



YADAV SOORYA AIR 7082



SANJAY K AIR 8619



SWATHI SIVADAS AIR 5643



ATHUL N K AIR 7092



JIYA JAMAL AIR 10399



GOPIKA G KRISHNAN AIR 5893



SMITHA M AIR 8212



ARCHANA G AIR 10399



NIMIA DAS AIR 11405



ASWAN S AIR 11981



VINAYA KRISHNA T R AIR 18786

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Activities conducted by the department

1. INTRODUCTION TO METAMATERIALS AND MICROWAVE MEASUREMENTS



The 'Introduction to Metamaterials and Microwave Measurements' workshop, held on 28 February 2024 by Prof. Gopikrishnan M, Assistant Professor at Government Victoria College, Palakkad, provided a electromagnetics, comprehensive overview of focusing metamaterials and microwave on technologies. Participants gained theoretical and practical knowledge through discussions, hands-on sessions, and demonstrations, covering topics such RF energy harvesting, metamaterials, as and reconfigurable intelligent surfaces.

2.Q & A WITH AKSHAY RAVEENDRAN



The event was organized by Elacsta, ECE Student's Society, on 4th March, featuring Akshav Raveendran, an alum of NSS College of Engineering and Cloud Software Developer at Intel. Akshay shared his journey from college to the corporate world, debunking myths about working multinational corporations and the tech industry. He discussed his experiences at Intel and Kalkitech, emphasizing the importance of learning and adapting. The Q&A session provided personalized guidance, leaving students with clarity and confidence to navigate their professional paths.

3.IEEE AP-S/MTT-S DISTINGUISHED INSTRUCTORS WORKSHOP (DIW)



The DIW program, jointly supported by IEEE AP-S and MTT-S, was held on 5th March 2024 to inspire undergraduate students to pursue wireless communications technologies. Renowned experts, including Prof. Jae-Sung Rieh, Prof. Shiban K Kaul, and Prof. Reyhan Baktur, shared their insights on extreme frequency electronics, electromagnetics for healthcare, and CubeSat antennas. Thev introduced the history of microwave antenna technologies, modern wireless systems, and cutting-edge applications, and shared their personal experiences. The event concluded with an interactive Q&A session, providing students with clarity and confidence to navigate their professional paths.

4.WORKSHOP ON IPR AWARENESS



The Intellectual (IPR) Property Rights 2024. workshop, held on March 14th empowered students with a comprehensive understanding of IPR and its applications in Electronics and Communication Engineering. Facilitated by Dr.Lija Arun, the interactive session covered various forms of intellectual property, patent filing processes, and practical applications for protecting creative ideas. Students gained a well-rounded foundation in IPR, with resources and tools to navigate the field independently. The workshop fostered a culture of innovation and intellectual property awareness, equipping students to safeguard their creative ideas and progress in their field.

5.Workshop on HIGH LEVEL SYNTHESIS FOR FPGA



The High-Level Synthesis (HLS) for FPGA workshop, held on April 9th, 2024, featured expert speakers Dr. Satyajit Das, Bijin Elsa, Baby Chilankamol, and Sunny, who provided a hands-on learning experience, simplifying FPGA design and equipping participants with practical skills. Students transformed complex algorithms into streamlined FPGA designs using HLS methodologies and FPGA kits. The workshop covered optimizing FPGA performance, speed, and power consumption, real-world with examples from telecommunications, embedded systems, and more. Participants explored innovative FPGA applications, fostering creative thinking and confidence in tackling design complexities. The workshop prepared students for future in academic endeavors research and professional roles, highlighting FPGA's role in innovation and efficiency driving across industries.

Faculty Achievements

- Prof Sidharth N, Associate Professor of ECE department has succesfully completed his PhD degree from APJ Abdul Kalam Technological University,Kerala. His research topic was "Characterisation of muscle fiber typology in fatiguing contractions using synthetic and recorded surface electromyography signals".
- Prof. Rekha G Nair, Associate Professor of ECE department has successfully completed her PhD degree from Amrita Vishwa Vidyapeetham Coimbatore . Her research topic was " Design and Development of Reconfigurable Power Dividers for Wireless Applications".

Student Achievements

- Gopika G Krishnan of S8 ECE A received the 2024 IEEE Systems Council Engineering Undergraduate Scholarship on behalf of the IEEE Systems Council.
- Adhith R of S8 ECE A NSS Unit 128 of NSSCE, received Best Volunteer Award of APJAKTU NSS Cell for the term 2022–23.
- Surabhi Rajesh of S8 ECE B received the Richard E. Merwin Student Scholarship, the highest level of volunteer service award given by the Computer Society.
- Akshaya M K of S6 ECE A was honoured with the Dr. Ruchi Sharma Memorial Youth Icon State Award 2024.
- Tanya Sanjeev Nair of S6 ECE B received the Vocational Services Award 2024 from the Rotary Club of Palghat East for her outstanding skills as a team leader.
- Arunkrishna P U, Kiran S M, and Abhishek S P of S4 ECE A earned 3rd place in the Ideathon organised by the IEEE Kerala Section, focusing on AI Systems for Environmental Restoration.
- Abhishek B of S4 ECE A earned the NCC B Certificate.
- Kavya M of S4 ECE A, Sreelakshmi P K and Parvathi Madhusoodanan of S2 ECE B secured 2nd place in band competition organised by 'RASAM' at Providence College of Engineering.
- Muhammad Ashhar of S4 ECE B secured 2nd place in the 'Hacksphere' Inter college Hackathon organised by STACKS NSSCE.
- Aswin Krishna E of S2 ECE A won 1st place in the XPLORIQ Quiz.
- Devika K M (2019-23 batch) has been admitted to a PhD program for an industry-funded project under the supervision of Professor Vinod A Prasad, Director of Research at the Singapore Institute of Technology.
- Lakshmi Menon V (2012-16 batch) achieved an All India Rank of 477 in the UPSC Civil Services examination.

Sports Achievements



- Rishikesh Unnikrishnan from S4 ECE B achieved 1st place in the Netball Interzone Championship.
- Madhubala M K from S2 ECE B achieved 1st place in the 100 meters and the 4x100 meter relay, set a new meet record in the 400 meters, and took 2nd place in the 4x400 meter mixed relay at the 6th Intercollegiate Athletic Meet hosted by APJ Abdul Kalam Technological University.





- Sudev A from S2 ECE B won 1st place in the E-Zone Men's Football Championship and earned 2nd place in the Interzone Men's Football Championship.
- Radhika M from S2 ECE B earned a bronze medal in the 5000 meters at the 6th Intercollegiate Athletic Meet under APJ Abdul Kalam Technological University and was the 2nd runner-up in handball at the E-Zone Women's Handball Tournament.



<u>Internships</u>



Industrial Visit



The industrial visit for the Semester 6 Electronics and Communication Engineering students was conducted on the 7th of May, 2024 at Advanced Telecom Training Center(ALTTC), Ghaziabad, Uttar Pradesh. ALTTC is the apex training centre of Bharath Sanchar Nigam Limited(BSNL). A total of 75, S6 students from the department along with 4 faculty members attended the industrial visit.

ALTTC is a distinguished institute setup on 1975, with the motto 'To Deliver Excellence through Training'. The institution focusses on providing training on telecom technologies such as Digital Switching, Mobile Communication, Server Administration, IT Security. ALTTC also has well equipped laboratories and model installations for training in various telecommunication systems. The facilities include Ericsson 2G lab, Nokia 3G lab, Next Generation Network lab equipped with IP TAX and IMS, IPV6 lab, Broadband MPLS lab. The visit successfully ended by lending a lot of information in the field, of communication and networking to the young minds.