KUMARAGURU
Institutions

DEPARTMENT ASSOCIATION

Monthly magazine

March’24

kct_ece

DEPARTMENT OF ECE

To be a centre of repute for learning and research with internationally accredited curriculum, state-of-the-art infrastructure and laboratories to enable the students to succeed in globally competitive environments in academics and industry.

The Department is committed to:

- Motivate students to develop professional ethics, self confidence and leadership quality.
- Facilitate the students to acquire knowledge and skills innovatively to meet evolving global challenges and societal needs.
- Achieve excellence in academics, core engineering and research.

PROGRAMME SPECIFIC OUTCOMES (PSOs)

Graduates of the Electronics and Communication Engineering Programme will have the ability to:

PSO1: Analyze and Design, verify and validate VLSI Systems by selecting appropriate hardware and software tools.

PSO2: Design, develop and validate inter disciplinary products/ process by applying the knowledge and skills of Embedded Systems, Signal Processing, Electromagnetics and Communication Engineering.

PROGRAMME EDUCATIONAL OBJECTIVES (PEOs)

The Programme Educational Objectives of Electronics and Communication Engineering Undergraduate Programme are:

PEO1: Graduates will be successful as Professionals, Researchers or Entrepreneurs in Electronics, Information and Communication Engineering disciplines.

PEO2: Graduates will continuously be updated with the state-of the art technology through formal and informal education to provide sustainable solutions.

PEO3: Graduates will demonstrate ethical and social responsibilities as an individual and in a team of diverse culture.

PROGRAMME OUTCOMES (POs)

PO1: The graduates would be able to apply the knowledge of mathematics, sciences, engineering fundamentals and skills to solve problems in electronics and communication.

PO2: The graduates would acquire skills to analyse complex problems in the domain of electronics and communication engineering.

PO3: The graduates would be able to design, develop and validate solutions for electronics and communication systems meeting the specifications vis-à-vis the society.

PO4: The graduates will have proficiency to acquire, analyse data and interpret results leading to relevant research.

PO5: The graduates would be able to use appropriate modern engineering/simulation tools including modelling and forecasting for complex technological entities.

PO6: The graduates would have awareness of and the need to uphold professional responsibilities and also be aware of health, safety, social and legal aspects of their work.

PO7: The graduates would have an understanding of the societal and human context in which their engineering contributions will provide sustainable development.

PO8: The graduates would carry out professional responsibilities adhering to ethical and standard norms of engineering practices.

PO9: The graduates would have ability to function effectively as an individual and as a member or leader in diverse teams and in multi-disciplinary environment.

PO10: The graduates would be capable of communicating effectively with the engineering community and society at large.

PO11: The graduates would demonstrate knowledge and understanding of engineering and management principles for technological and socially relevant projects.

PO12: The graduates would recognize the need for and also have ability to engage in continual, life-long learning.

ROBO SOCCER

DESCRIPTION:

A thrilling collision of technology and sport as passionate engineers showcased their robotic creations in a high-stakes soccer tournament. The cutting-edge robots battled it out on the field, aiming to score the most goals and claim victory.It's was a unique fusion of innovation, competition, and the love of the game, all in one electrifying event.

WINNERS:

SELVA PRASANNA
AK

RUNNERS:

CHANDRU
KISHANTH
SHANKAR NIDHISH
GURUPRASATH
GOKULRITHIS
NAVEN

EVENT ORGANISERS:

KAVYASRI M - 22BEC070
CAVYASRI J - 22BEC023
PUJASHRI S - 22BEC213

TIME: 10.00 AM to 5.00 PM

VENUE: SFS Block- Ground floor

DATE: 23rd March 2024

NATIONAL E- MICROMOUSE CHALLENGE

DESCRIPTION:

National E-Micromouse Challenge prompted the participants to design and build a small autonomous robot that can navigate a maze efficiently and reach the target destination as quickly as possible. The challenges combined aspects of engineering, programming, and problem-solving, challenging participants to create innovative solutions for maze-solving algorithms and robot design. Key objectives included speed, accuracy, and efficiency in navigating complex maze configurations within a given time frame.

WINNERS:

SUTHAN
DHIVA
GOWTHAM

RUNNERS:

MANOJ
INDHUJA
MOHAMEDUVAISE

EVENT ORGANISERS:

DHARANIYA V S - 22BEC029
FELIX MATTHEW J - 22BEC034

TIME: 10.00 AM to 3.00 PM

VENUE: Auditorium Lawn

DATE: 23rd March 2024

IOT HACKATHON

DESCRIPTION:

The IoT hackathon fostered the participants in developing IoT solutions addressing real-world challenges across various sectors such as agriculture, healthcare, smart cities, environment and pollution control and monitoring, and industry 4.0.The event showcased impressive innovation to solve real-world challenges. Participants demonstrated strong problem-solving skills, technical proficiency in developing IoT solutions.

WINNERS:

HARINI
ASHWIN RAJ M
VEERAMANI
DHEEPAUK N
GOWTHAM S

RUNNERS:

VAITHEESWARAN
PUGALENTHI
PRASANTH
GIRI PRASATH
UTHEYANITHI

EVENT ORGANISERS:

MADHUMITHAA S – 22BEC086
SUJAN S – 22BEC173

TIME: 9.00 AM to 5.00 PM

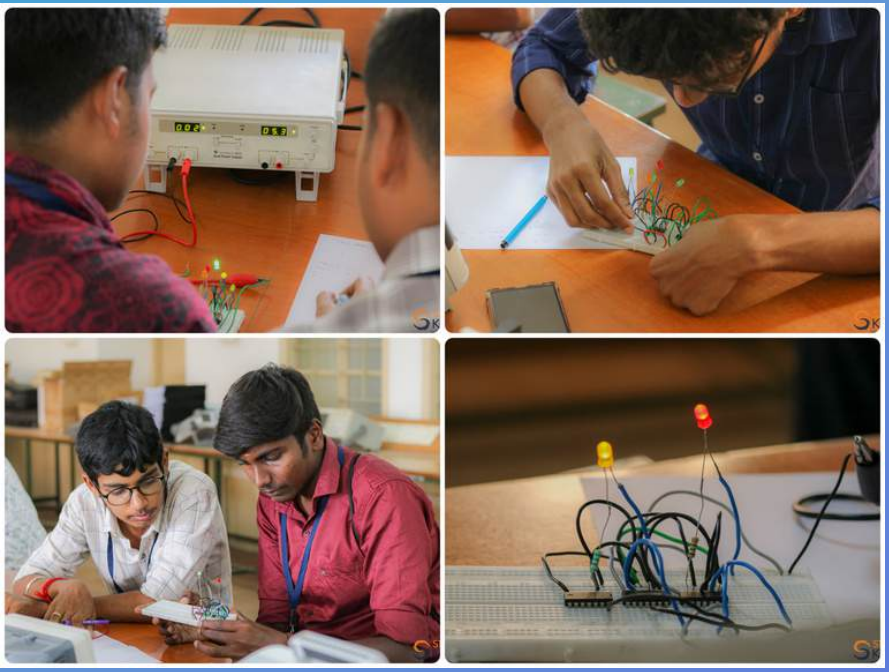
VENUE: Mahatma Gandhi Central Library-Admin block

DATE: 20,21st March 2024

DIGITRIX

DESCRIPTION:

Digitrix aimed to be an exciting platform where participants unleashed their creativity, technical skills, and innovation in digital circuit design. . The challenge tested their analytical skills and ability to troubleshoot complex circuits under pressure, pushed participants to apply their knowledge and skills to construct intricate circuits within a limited timeframe. Digitrix left a lasting impression, inspiring participants to continue exploring digital circuit design and innovation



WINNERS:

SHANUSH
MIDUN THANIGACHALAM SUBBARAYAN

RUNNERS:

NIKHITHA M
THARANIKA R

EVENT ORGANISERS:

ARUNACHALAM S - 22BEC017
HARSHINI M - 22BEC051

TIME: 9.00 AM to 3.00 PM

VENUE: Communication Lab C-302

DATE: 22nd March 2024

EMBEDDED SYSTEM AND ML INTEGRATION

DESCRIPTION:

The Embedded System and ML Integration workshop offered immersive hands-on experiences, integrating machine learning with embedded systems using software tools and microcontrollers like Arduino. Through project-based learning and community interaction, participants fostered collaboration and networking opportunities. Key data included programming proficiency gained, successful implementation of machine learning algorithms on microcontrollers, and improved understanding of optimization techniques

RESOURCE PERSON:

Mr.Selvaraj Muthusamy
Director, Handson Technologies

EVENT ORGANISERS:

GAYATHRI B - 22BEC035
YAZHINI S - 22BEC206

TIME: 9.00 AM to 5.00 PM

VENUE: Centre Of Excellence Lab – C block

DATE: 18,19th March 2024

REAL TIME OPERATIONG SYSTEM

DESCRIPTION:

The workshop encompassed a diverse array of pertinent subjects concerning Real-Time Operating Systems (RTOS), offering participants valuable insights into the latest advancements and practical applications within the domain. The workshop provided guidance on developing practical applications using RTOS, including configuring kernel settings, designing real-time task structures, and optimizing system performance. Participants gained hands-on experience in implementing RTOS-based solutions for diverse embedded system requirements.

RESOURCE PERSON:

Dr.J.Mohan Kumar
Associate Professor,KCT

EVENT ORGANISERS:

NAVEENA D - 22BEC100
SAMRIDA VARSHA T D - 22BEC136

TIME: 9.00 AM to 4.30 PM

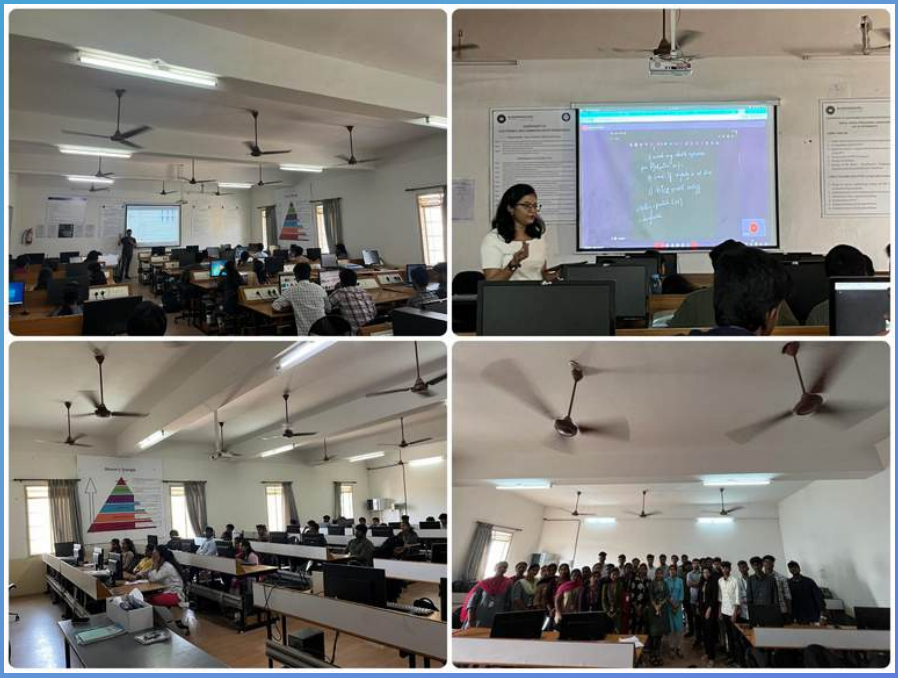
VENUE: Microprocessor Lab – C block

DATE: 19,20th March 2024

SYSTEM ON CHIP

DESCRIPTION:

The workshop featured a dynamic combination of lectures and interactive sessions, attendees were immersed in real-world case studies and demonstrations, gaining a comprehensive understanding of SoC architecture and design principles. They acquired practical skills for designing, developing, and optimizing SoC-based systems, along with valuable insights into verification, testing, and performance optimization techniques. Additionally, participants were also exposed to emerging trends and technologies in SoC design.



RESOURCE PERSON:

Mr. Jahir Hussain
Product designer, Lifesignals Group

EVENT ORGANISERS:

ROSAN KARTHIK - 22BEC130
PON ARAVIND - 22BEC110

TIME: 9.00 AM to 4.00 PM

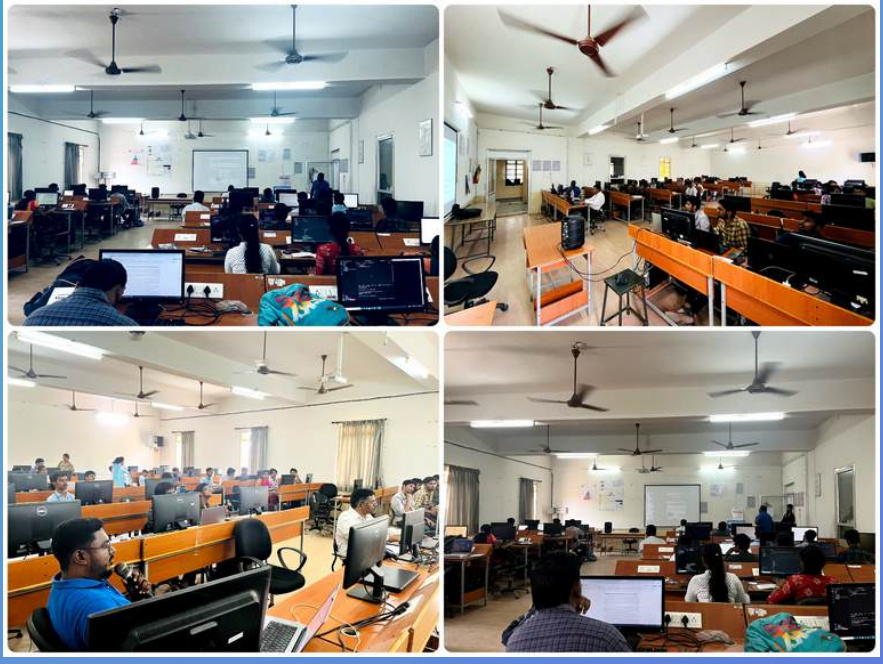
VENUE: Digital signal processing and Networking Lab – C block

DATE: 18,19th March 2024

RUST EMBEDDED PROGRAMMING

DESCRIPTION:

The workshop provided participants with hands-on experience and practical knowledge of utilizing the Rust programming language for embedded systems development. Through interactive sessions and exercises, attendees learnt how to leverage Rust's safety, performance, and concurrency features to develop robust and efficient software for embedded platforms, to leverage Rust effectively in their embedded projects, contributing to the advancement of embedded programming and harnessing the benefits of Rust's growing popularity in the field.



RESOURCE PERSON:

Mr. Ghanithan Subramani
Senior software engineer
XRG consultancy Pvt Ltd

EVENT ORGANISERS:

SANDHIYA K – 22BEC138
MADHUBALA G – 22BEC085

TIME: 9.00 AM to 5.00 PM

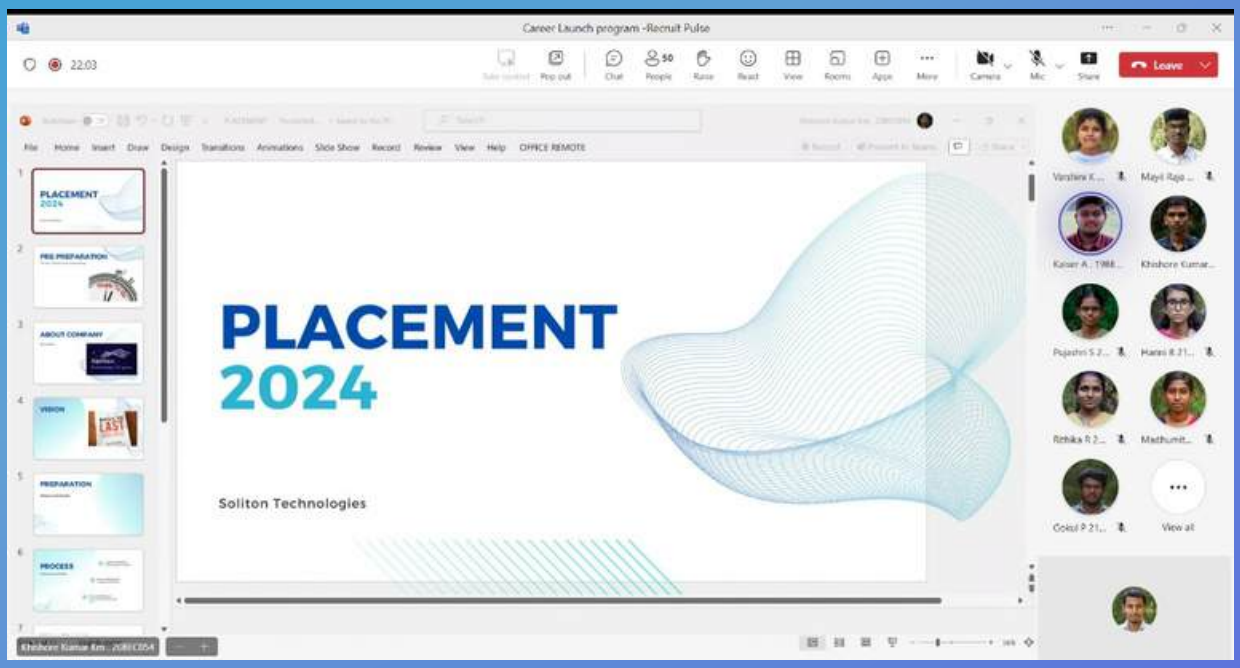
VENUE: VLSI LAB – C block

DATE: 16th March 2024

CAREER LAUNCHPAD
RECRUIT PULSE

DESCRIPTION:

The recruit pulse was a focused initiative aimed at assisting students in their preparation for placements and recruitment processes at soliton. The session highlighted the company's values and expectations. Throughout the session, participants gained invaluable knowledge about the updated recruitment processes at Soliton and learned strategies to navigate them with ease.



RESOURCE PERSON:

Khishore kumar KM
Final year ECE
Intern-Soliton

Kaiser A
Project Engineer
Soliton Technologies

EVENT ORGANISERS:

JAGANNATH V 22BEC054
MADHUMITHAA S 22BEC086

TIME: 11.00 AM to 12.00 PM

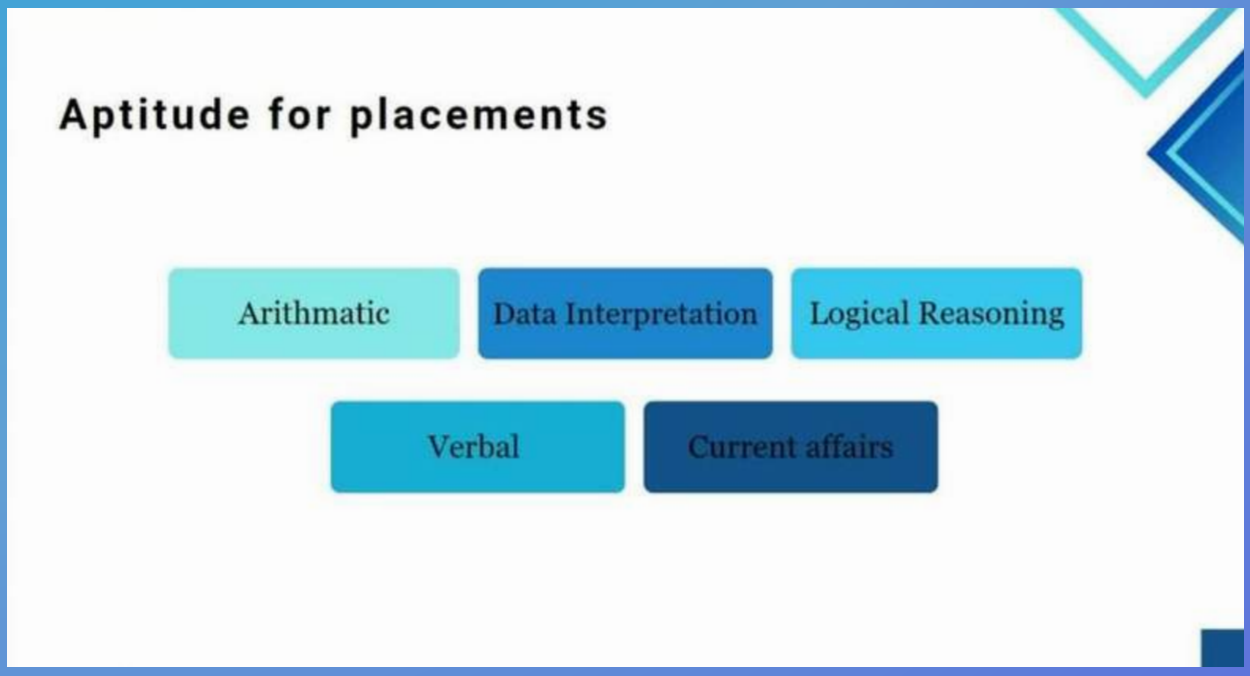
MODE: Online MS Teams

DATE: 3rd March 2024

AMPLIFY IN APTITUDE

DESCRIPTION:

Amplify in Aptitude ,an event tailored to enhance participant's aptitude skills, specifically geared towards improving their performance in job placements. The event aimed to equip individuals with the tools and strategies necessary to excel in competitive job interviews and assessment tests, ultimately maximizing their chances of securing desired employment opportunities.



RESOURCE PERSON:

Tharun Raj G
Final year ECE
Mu-Sigma

EVENT ORGANISERS:

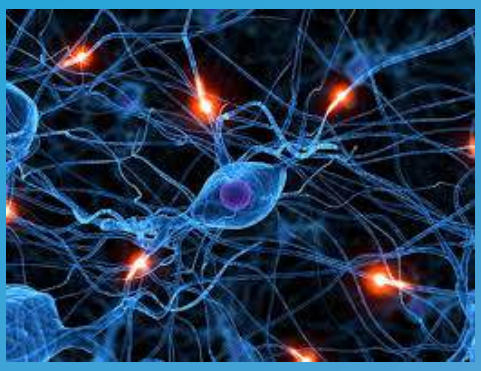
HINDUJA R - 22BEC052
PUJASHRI S - 22BEC213

TIME: 5.00 PM to 6.30 PM

MODE: Online MS Teams

DATE: 9th March 2024

Bioelectronics: Merging Biology and Technology



Bioelectronics is a cutting-edge field that combines biological systems with electronic devices to revolutionize healthcare, diagnostics, and beyond. This interdisciplinary science focuses on creating interfaces between living tissues and electronics, enabling groundbreaking applications like neural prosthetics, biosensors, and bio-computing.

Biosensors, powered by sophisticated electronic circuits, can detect minute biological changes, providing real-time data on a wide range of health indicators. These sensors are often integrated into wearable devices, like smartwatches, that monitor vital signs and alert users to potential health issues. The electronics in these devices must be incredibly robust and energy-efficient to function effectively over long periods.

Neural prosthetics, such as cochlear implants, restore lost functions by directly interacting with the nervous system, while biosensors provide continuous health monitoring by detecting specific biological molecules. Advanced research in bio-computing explores the use of DNA and proteins as computing elements, potentially surpassing traditional silicon-based computers in efficiency.

EDITORS:

HARSHINI M 22BEC051
AISHWARYA A K 22BEC007
SANDHIYA K 22BEC138