



MONTHLY MAGAZINE FEBRUARY 2023

**PREPARED BY
ASSOCIATION OF ECE**



DEPARTMENT OF ECE



VISION

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.



MISSION

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.

How Internet works



The Internet is a vast, sprawling collection of networks that connect to each other. In fact, the word "Internet" could be said to come from this concept: interconnected networks.

Since computers connect to each other within networks and these networks also all connect with each other, one computer can talk to another computer in a faraway network thanks to the Internet. This makes it possible to rapidly exchange information between computers across the world.

Computers connect to each other and to the Internet via wires, cables, radio waves, and other types of networking infrastructure. All data sent over the Internet is translated into pulses of light or electricity, also called "bits," and then interpreted by the receiving computer. The wires, cables, and radio waves conduct these bits at the speed of light. The more bits that can pass over these wires and cables at once, the faster the Internet works.



There are two main concepts that are fundamental to the way the Internet functions: packets and protocols.

Packets

In networking, a packet is a small segment of a larger message. Each packet contains both data and information about that data. The information about the packet's contents is known as the "header," and it goes at the front of the packet so that the receiving machine knows what to do with the packet. To understand the purpose of a packet header, think of how some consumer products come with assembly instructions.

When data gets sent over the Internet, it is first broken up into smaller packets, which are then translated into bits. The packets get routed to their destination by various networking devices such as routers and switches. When the packets arrive at their destination, the receiving device reassembles the packets in order and can then use or display the data.

Protocols

It requires the use of communications techniques that are understandable by all connected computers, just as two people who grew up in different parts of the world may need to speak a common language to understand each other.

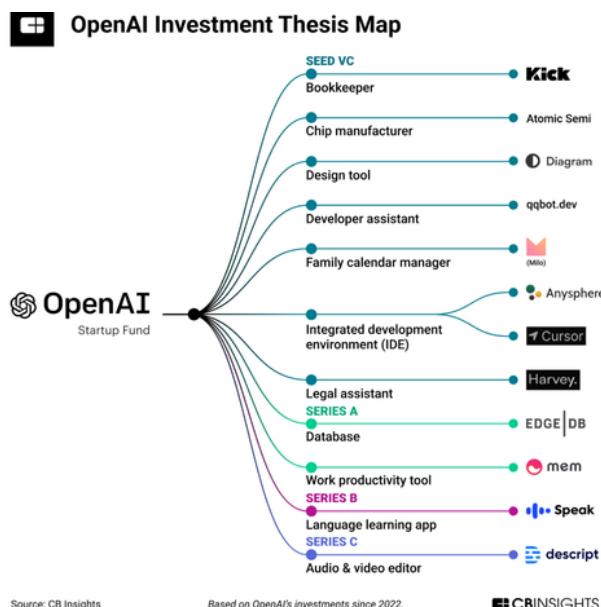
There are protocols for sending packets between devices on the same network (Ethernet), for sending packets from network to network (IP), for ensuring those packets successfully arrive in order (TCP), and for formatting data for websites and applications (HTTP). In addition to these foundational protocols, there are also protocols for routing, testing, and encryption.



Open AI's Evolving Ecosystem

OpenAI, the company which developed ChatGPT, is investing in startups which build on to of its models to address specific areas.

OpenAI has a \$100 million fund to invest and has invested in twelve early stage startups.



ChatGPT is an artificial intelligence chatbot developed by OpenAI and launched in November 2022. It is built on top of OpenAI's GPT-3 family of large language models and has been fine-tuned (an approach to transfer learning) using both supervised and reinforcement learning techniques.

Limitations

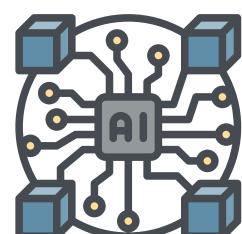
ChatGPT suffers from multiple limitations. OpenAI acknowledged that ChatGPT "sometimes writes plausible-sounding but incorrect or nonsensical answers".

This behavior is common to large language models and is called artificial intelligence hallucination. The reward model of ChatGPT, designed around human oversight, can be over-optimized and thus hinder performance, otherwise known as Goodhart's law.

ChatGPT has limited knowledge of events that occurred after 2021. According to the BBC, as of December 2022, ChatGPT is not allowed to "express political opinions or engage in political activism". Yet, research suggests that ChatGPT exhibits a pro-environmental, left-libertarian orientation when prompted to take a stance on political statements from two established voting advice applications.

Advancement in education due to AI

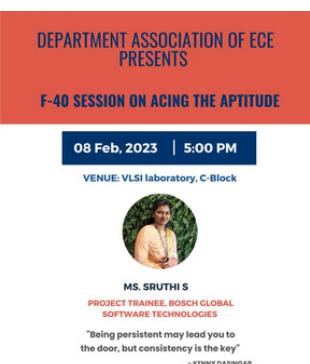
- Voice assistants
- Personalized learning
- Smart content
- Intelligent tutoring
- Virtual learning environment
- Universal access to education
- Admin tasks
- Grading software



DA ACTIVITIES

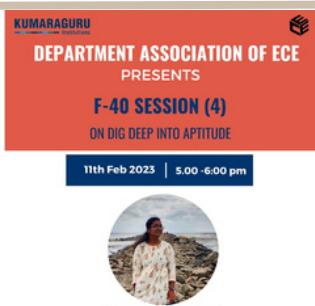
PLACEMENTS:

THEME: Placement series Elevate Resume
DATE: 06/02/2023
DAY: Monday
PLATFORM: VLSI Laboratory
ORGANIZER: Linganiveth



THEME: F40 session on the overview of programming
DATE: 12/02/2023
DAY: Sunday
PLATFORM: Ms teams
ORGANIZER: Asvika

THEME: F40 session on acting the aptitude
DATE: 08/02/2023
DAY: Wednesday
PLATFORM: C -208
ORGANIZER: Linganiveth



THEME: F40 session on dig deep into the aptitude
DATE: 11/02/2023
DAY: Saturday
PLATFORM: Ms teams
ORGANIZER: Navipreethi



Mt. Everest is
named after an
engineer ,
'George Everest'

2520

@FACTINFOYT

DID You Know?

2,520 IS THE SMALLEST NUMBER THAT
CAN BE DIVIDED EXACTLY BY ALL THE
NUMBERS 1 TO 10.

Engineering Realities

HEATED Gold is called,
Ornament.

BEATED Copper is called,
Wire,

COMPRESSSD Carbon is called
Diamond,

HEATED,BEATED & COMPRESSSD person

AN ENGINEER....!!!





QUIZ TIME

1. Which of the following is not a property of semiconductors used in electronic devices?

- a) They excite electrons
- b) They don't emit light
- c) They have high thermal conductivity
- d) They have variable electrical conductivity



2. Which of the following diode is used in adjustable band pass filter electronic circuits?

- a) Zener diode
- b) Varactor diode
- c) Tunnel diode
- d) Schottky diode

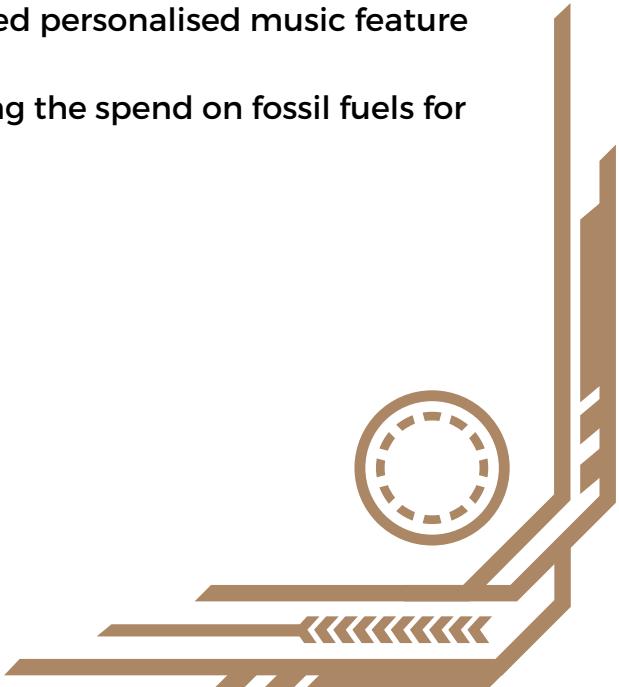
1. b) They don't emit light
2. c) Tunnel diode

ANSWERS:

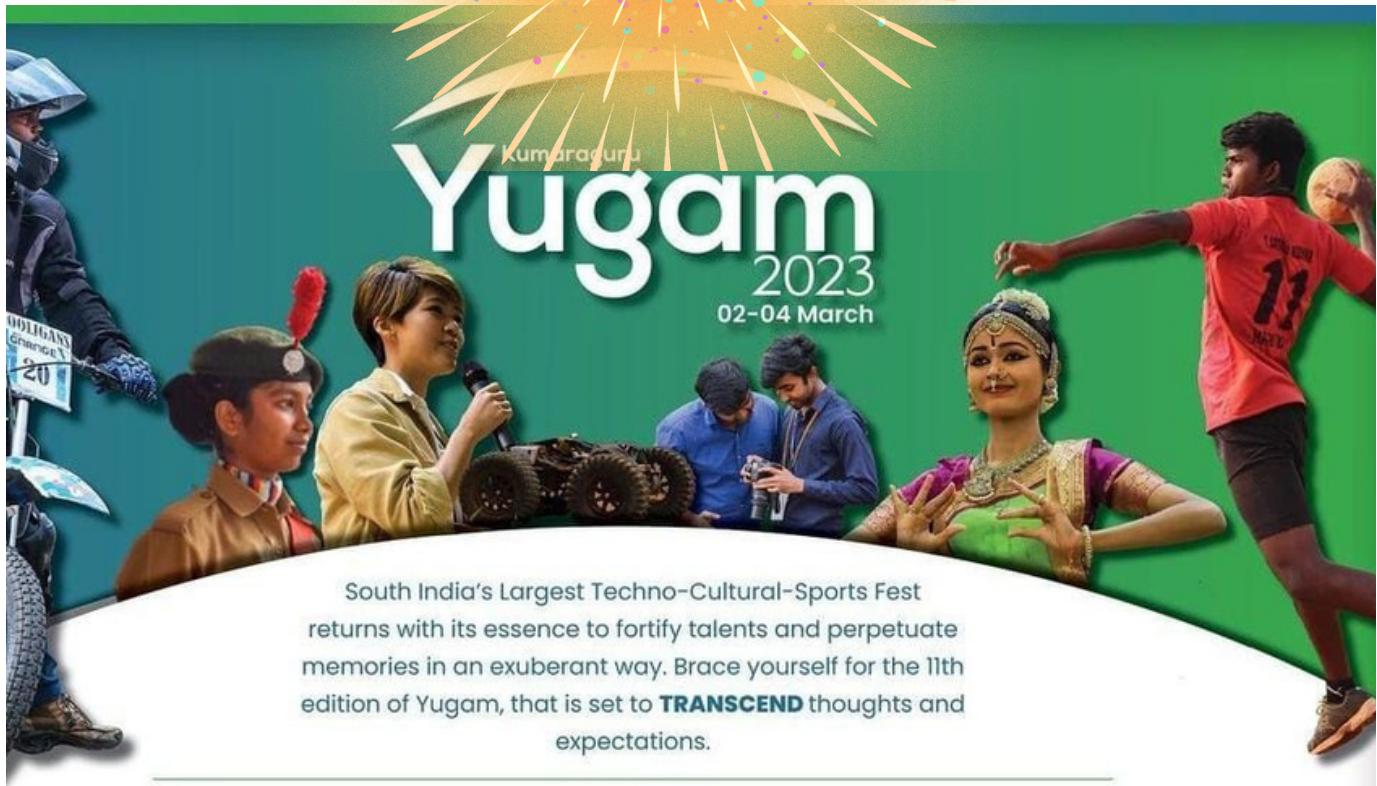


HOTSPOTS:

- TempWatch is a temperature monitoring bracelet that alerts caregivers if a newborn may be at risk of hypothermia.
- Music platform spotify launches AI-powered personalised music feature 'DJ'.
- \$1.1 Trillion spent on green energy matching the spend on fossil fuels for the first time in history.



YUGAM 2023



South India's Largest Techno-Cultural-Sports Fest returns with its essence to fortify talents and perpetuate memories in an exuberant way. Brace yourself for the 11th edition of Yugam, that is set to **TRANSCEND** thoughts and expectations.

60+ Technical events	25+ Literary events	20+ Cultural events	60+ Workshops	10+ Sports	5 Proshows	4 Conclaves	10 Lakh worth Cash Prizes
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Highlighted Events



Events : +91 94425 55956 | Workshops: +91 97909 77113 | Sponsors: +91 86107 35933



kumaraguru_yugam

Register at

yugam.in



kct_ece

WORKSHOPS CONDUCTED BY ECE DEPARTMENT



5G Communication

"It's not that we use technology. We live technology." Fifth-generation wireless (5G) is the latest iteration of cellular technology, engineered to greatly increase the speed and responsiveness of wireless networks. Get to explore more insights on 5G Communication.

Registration Fee: ₹ 400

27 FEB | 10.00 AM to 04.00 PM | 9994476152



Automotive Embedded system

An Electronic control unit [ECU] is being used in automobiles. Over the past two decades, the number of complex embedded systems in automobiles has rapidly increased. Every year, automobile manufacturers integrate embedded systems for various functions, including security, audio, and ignition inside their cars. Join this workshop to explore more about Automotive Embedded systems!!

Registration Fee: ₹ 500

28 FEB | 09.00 AM to 05.00 PM | 9360111252



Advanced Driver Assistance System

Advanced driver assistance systems (ADAS) are primarily focused on collision avoidance technologies and driver aids, such as night vision, driver alertness and adaptive cruise control. Learn from industry experts and deepen your understanding of ADAS, a vital aspect of the electrical engineering field. Enhance your skills and impact the future of mobility.

Registration Fee: ₹ 400

28 FEB | 09:30 AM to 04.30 PM | 9360239750



IOT With Raspberry Pi

Learn how to use IoT with Raspberry Pi! IoT technology with Raspberry Pi allows you to monitor and control devices remotely, collect and exchange data and create automation systems with relative ease. Explore in detail about setting up Pi, Python Language Basics, How to code for Pi, OpenCV applications, MQTT, Embedded Machine Learning and much more.

Registration Fee: ₹ 600

27 & 28 FEB | 09:00 AM to 04:00 PM | 6379823422



Human Machine Interface (HMI)

As technology is emerging, it is very essential for academia to upgrade the students. Human Machine Interfaces (HMIs) are ubiquitous, starting from smart watches to biomedical devices automotive. Take this time to learn and gain more knowledge about HMI.

Registration Fee: ₹ 500

1 MAR | 10.00 AM - 04.00 PM | 9597837200

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09



EVENTS CONDUCTED BY ECE DEPARTMENT

TECHNICAL EVENTS

TECHNICAL EVENTS

Yugam
2023

Embedded Programming Challenge

From intelligent homes, automobiles and buildings to a mini voice-control light, we see it everywhere - the embedded programming. It makes our lives simpler. Here we present some exciting and straightforward challenges in the embedded that you will love to solve. Develop your skills in thinking a step differently!

Prize Amount: ₹ 5000

03 MAR | 01:00 PM - 04:00 PM | 89032 99693

For Registration:
yugam.in

[Facebook](#) [Twitter](#) [Instagram](#)

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TECHNICAL EVENTS

Yugam
2023

Reverse Engineering

Are you a tech-savvy problem-solver who used to open up used gadgets around the house? Do you have a passion for reverse engineering and tinkering with systems to understand how they work? If so, you don't want to miss our event! Well, "Reverse Engineering" brings up a challenge which lets you compete with people just like you in identifying the gadget and bringing it back together. Whether you're a seasoned pro or a beginner looking to get your feet wet in the world of reverse engineering, there's something for everyone at our event.

Prize Amount: ₹ 5000

03 MAR | 10:00 AM - 01:00 PM | 98432 57171

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TECHNICAL EVENTS

MYSTERIO

Do you love to solve all the clues and mysteries? Then this is for you to revive the chills of encryption and decryption of message words. Here comes a startling opportunity to show case the thinking, time management along with tech skills. Gear up your brain! Solve clues and get key! Find hidden words! Win cash prizes!

Prize Amount: RS 5000

04 MAR | 10.00 AM - 01.00 PM | 9080161600

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TECHNICAL EVENTS

Circuitrix

Circuitrix provides the stage for demonstrating the finest skills of those passionate to dwell in the world of components and connections. Come and test your technical wizardry against the best and unravel simple but dynamic day-to-day circuits.

Prize Amount: ₹ 6000

02 MAR | 10:00 AM - 01:00 PM | 78069 93150

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TECHNICAL EVENTS

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SPECIFIC EVENTS

Kumaraguru
Yugam
2023

National E-Micromouse Challenge

Race to the Finish: Outwit, Outsmart, Outperform! Discover the quickest route to victory with algorithms that always outpace the competition. Time is ticking, but with the right strategy, you can beat the odds and claim the crown. Join the challenge and show the world what you're made of. The only thing that matters is getting to the destination first.

Prize Amount: ₹ 15,000

Registration Fee: ₹ 500 per team

03 MAR | 10 AM to 1 PM | 9360311478

For Registration:
yugam.in

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SPECIFIC **EVENT**

HIGHLIGHTED **EVENT**

Kumaraguru
Yugam
2023

Co-Sponsor

Register at:
yugam.in

Tech expo

Tech Expo 2023, a stage for exhibiting your emerging innovations on major blooming technical aspects answering the challenges of today. Provides opportunity for students from all over India to bring out your **prototypes or proof of concepts** on major domains and wins cash prizes.

Mar 4
2023

Participation Fee:
Rs.750 / Team
Team of 2 to 4

Cash Prize:
50K

Themes: Electric and Hybrid Vehicle, AgriTech, Artificial Intelligence, Health Tech, Smart Cities and Infrastructure.

[@kumaraguru_yugam](#) | Contact : 9790977113





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