KUMARAGURU
Institutions

MAGAZINE
SEPTEMBER - DECEMBER
2022
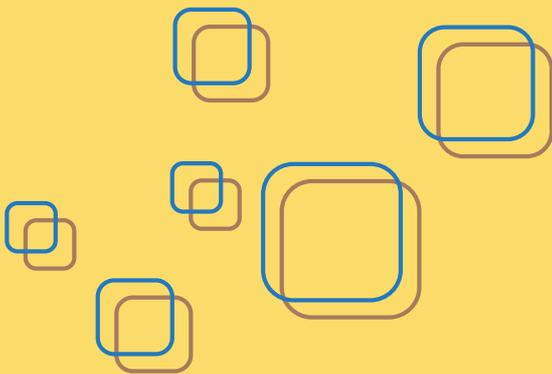
PREPARED BY
ASSOCIATION OF ECE

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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.

E-Catechize

Date: 15-9-2022
This is a Quiz competition for the students to test and engage the Scientific and Electronics brains in you. Come participate and showcase your knowledge.

DA Probation Intake

Date: 10-8-2022
The Department Association of ECE conducts Probation for the freshers to explore the DA and find various activities ongoing & make them involved in it.

Crack It Up

Date: 16-9-2022
An event to boost the student's technical knowledge and creative, thinking skills on spot for the various activities.

DA Recruitment

Date: 21-9-2022
Department Association Official Recruitment for the students of 2nd and 3rd year for different roles and responsibilities.

Macomedia

Date: 30-9-2022

This event is to develop the observation, concentration and thinking skills. Sink the students into fun and unwrap the experience of learning with interest.

CADUP

Date: 6-10-2022

A technical event mainly focusing freshers of the department to bring out the student's technical skills in the field of electronics by designing the circuits using online simulation software.

TalkTrix

Date: 10-10-2022

The purpose of the event is to engage the students in a fun way and also work on their vocabulary and language fluency skills. Then to make students interactive to relieve from stress.

PEP TALK

Date: 13, 14-10-2022

This event is for the students to improve their marketing and communicating skills. It also includes on spot roles given to participant and make them to act for the role for given time.

InfoDom

Date: 15-10-2022

The objective of the event is to give brief awareness about the domains available in ECE department. The freshers will get an idea about the domains of the department.


BattleDore

Date: 3-11-2022

Physical fitness need more focus in this generation. So, we conducted "BATTLEDORE" event and make the students to get boost for their focus and concentration.

Fantastic 40 (Kickoff session)

Date: 14-12-2022

Department Association of ECE presents Fantastic 40 , it is program mainly focusing for third year students to provide them placement training to improve technical expertise and interpersonal skills by conducting mock interviews, company specific test , aptitude tests, technical tests. This program can provide you various opportunities and experience .
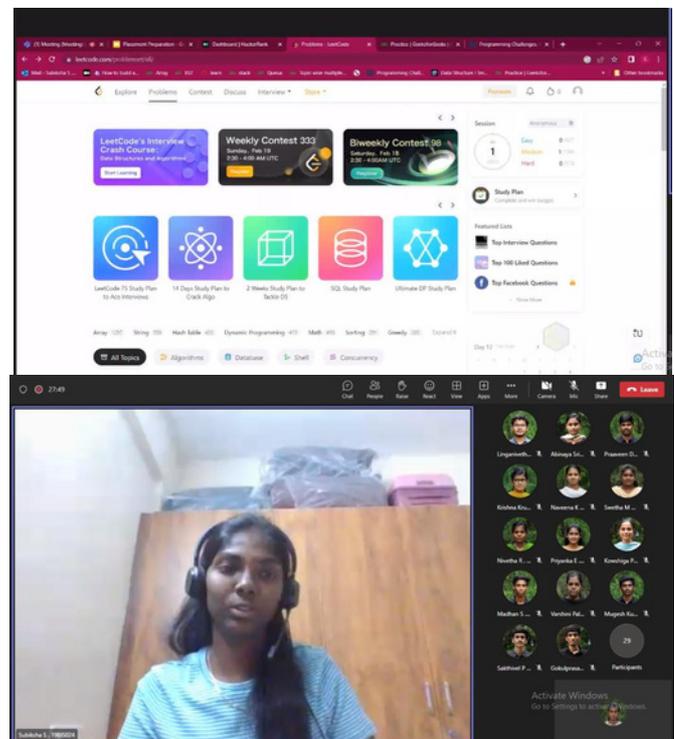
GENERAL AND TECHNOLOGY UPDATES

India to press Apple, Samsung for faster 5G software upgrades in phones
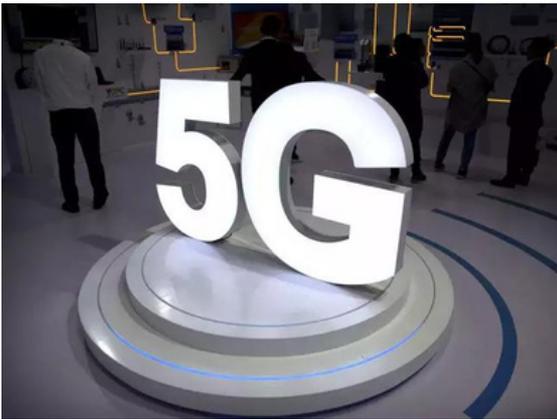
India's government will push Apple, Samsung and other mobile phone manufacturers to prioritise rolling out software upgrades to support 5G in the country, amid concerns that many of their models are not ready for the recently launched high-speed service.

Prime Minister Narendra Modi launched 5G services on Oct. 1 amid much fanfare, with leading telecom operator Reliance Jio saying it would make the service available in four cities and rival Bharti Airtel in eight. Both companies said the service would be expanded next year.

In August, Jio, India's biggest mobile carrier with more than 420 million customers, snapped up airwaves worth $11 billion in a $19 billion 5G spectrum auction. Airtel spent more than $5 billion, while Vodafone doled out above $2 billion.

Tata Sons announces merger of Air India and Vistara; Singapore Airlines to own 25.1% in merged entity

Singapore Airlines (SIA) and Tata Sons announced that they have agreed to merge Air India and Vistara, with SIA getting a 25.1 per cent stake in the merged entity at an investment of Rs 2,058.5 crore ($250 million) in Air India as part of the transaction.

This 25.1 per cent stake will be in an enlarged Air India group – it will have Air India, Vistara, AirAsia India and Air India Express – and the merger of all airlines is targeted for completion by March 2024, subject to regulatory approvals. The group is already in the process of merging Air India Express and AirAsia India into one entity that will provide low-cost flight options

"The merger of Vistara and Air India is an important milestone in our journey to make Air India a truly world-class airline. We are transforming Air India, with the aim of providing great customer experience, every time, for every customer. As part of the transformation, Air India is focusing on growing both its network and fleet, revamping its customer proposition, enhancing safety, reliability, and on-time performance. We are excited with the opportunity of creating a strong Air India which would offer both full-service and low-cost services across domestic and international routes.We would like to thank Singapore Airlines for their continued partnership," Natarajan Chandrasekaran, Chairman, Tata Sons, was quoted in the statement.

Electric robot tractors powered by Nvidia AI chips are here.

Monarch Tractor, an electric smart tractor company, says its first AI-powered farming vehicles, dubbed the MK-V, are rolling off the production line. It's the Livermore, California-based startup's first product, and it uses Nvidia's Jetson edge AI platform to perform agricultural tasks with or without a driver behind the wheel.

"The NVIDIA Jetson enables the MK-V to run low-latency, real-time AI applications while at the same time conserving energy for longer battery life and extended run time," said Monarch Tractor CEO Praveen Penmetsa

Many tractors out in farming fields have semiautonomous modes but largely require a driver to be seated. They also mostly run on diesel gas, so the MK-V, with its fully electric design and driver-optional smarts, is claiming it's the first production model of its kind.

India's unemployment rate eases to 7.2% in July-September 2022:

India's unemployment rate for people aged 15 years and above in urban areas eased to 7.2 percent in the fiscal second quarter ending September 30 from 9.8 percent a year earlier, indicating a sustained economic recovery following the coronavirus pandemic that had rendered millions jobless.

Data from the National Statistical Office's 16th Periodic Labour Force Survey showed that the unemployment rate among females (aged 15 years and above) in urban areas slowed to 9.4 percent in July-September from 11.6 percent a year ago. In April-June, it was 9.5 percent.

The estimates of unemployed persons in CWS give an average picture of unemployment in a short period of seven days during the survey period.

Research on cancer at IIT-Guwahati

Researchers from the Indian Institute of Technology-Guwahati researchers have developed a new strategy to deliver chemotherapeutic drugs specifically to the cancerous cells in a patient's body. The results have been published in the journals of The Royal Society of Chemistry. The research papers have been co-authored by Prof. Debasis Manna, Department of Chemistry, along with research scholars Subhasis Dey, Anjali Patel, and Biswa Mohan Prusty

Apple may shift some iPad production away from China to India

After shifting iPhone production away from China, it now looks as if Apple's got its eye on iPad production. According to CNBC, Apple is discussing producing some of its iPads in India to help diversify its supply chain.

The news comes almost two years after reports emerged that Apple is considering manufacturing iPads in Vietnam, too. Apple is doing this as the company looks to move up to 30 percent of its manufacturing outside of China

Apple's been trying to diversify its manufacturing for years amid trade wars between China and the US and rising labor costs in China. More recently, strict covid restrictions sparked countrywide protests that last month forced Apple to cut down the production of iPhone 14s there, leading to shipping delays. Apple also started manufacturing the iPhone 14 in southern India shortly after its launch. It marked the first time the tech giant had shifted production away from China to India so quickly after releasing a flagship smartphone.

"I think in five years, 35% [of iPhones] will be manufactured in India," Gene Munster at Loup Ventures told CNBC.

Hackers linked to Chinese government stole millions in Covid benefits, Secret Service says

Hackers linked to the Chinese government stole at least $20 million in U.S. Covid relief benefits, including Small Business Administration loans and unemployment insurance funds in over a dozen states, according to the Secret Service.

The theft of taxpayer funds by the Chengdu-based hacking group known as APT41 is the first instance of pandemic fraud tied to foreign, state-sponsored cybercriminals that the U.S. government has acknowledged publicly, but may just be the tip of the iceberg, according to U.S. law enforcement officials and cybersecurity experts.

They, most speaking on the condition of anonymity because of the sensitivity of the subject matter, say other federal investigations of pandemic fraud also seem to point back to foreign state-affiliated hackers.

Google launches 'Flood Hub', a platform to forecast flood

Google has launched a platform that displays flood forecasts, namely 'FloodHub'. This platform shows the area and time where floods could occur, in order to inform people about the natural calamity and authorities can assist them with effectively.

NASA's InSight lander loses power, enters retirement on Mars

The lander's retirement package involves sitting on the Martian surface coated in the dust that killed it.

On Mars, another machine just bit the dust. The marsquake-detecting, photo-snapping InSight lander has now officially completed its mission and will now spend its retirement in the same place it spent its career — sitting on a flat plain on the Martian surface, as dust slowly accumulates on its solar panels and other instruments.

We've known this was coming for a while. InSight's solar panels, which generate electricity for the lander, have been getting covered with dust ever since they unfurled. The mission, officially known as the Interior Exploration using Seismic Investigations, Geodesy and Heat Transport (InSight), was expected to run out of power this summer, but a spate of good weather bought it a few additional months of work on Mars.

Still, the mission was successful enough that NASA decided in April to extend the mission until the end of this year — or until the lander ran out of power, whichever came first.

Twitter suspends @ElonJet plane-tracking bot after Musk pledged to leave it up
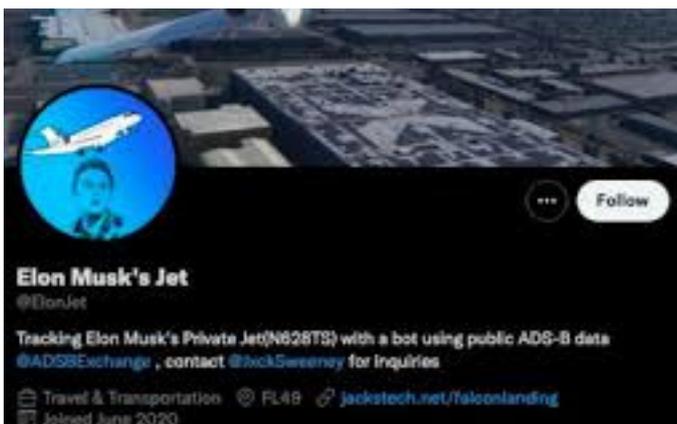
Twitter suspended the ElonJet account that tracks the movements of Elon Musk's private jet, despite Musk previously stating he would leave the account up as part of his "commitment to free speech."

"Well it appears @ElonJet is suspended," account creator Jack Sweeney wrote today. He added that people can still follow the private jet bot on other platforms, including Facebook, Instagram, Telegram, and Truth Social.

After saying he wouldn't ban an account that tracks the movement of his private jet, Elon Musk's Twitter has done exactly that, suspending the @ElonJet account alongside its creator and several other accounts that he operates. Obviously Twitter is a private company that's free to moderate its platform however it wants, but the case highlights how even a "free speech absolutist" like Musk can come around pretty quickly on content moderation when his personal safety is involved.

Microsoft says it has offered Sony a 10-year deal on new Call of Duty games

Microsoft has offered Sony a 10-year contract to make future Call of Duty games available on PlayStation if its proposed Activision Blizzard acquisition goes ahead. Microsoft president Brad Smith confirmed the deal in an op-ed in The Wall Street Journal today, noting that "Sony has emerged as the loudest objector" to Microsoft's proposed $68.7 billion acquisition and that "it's as excited about this deal as Blockbuster was about the rise of Netflix."

Microsoft, maker of the Xbox game console, faces resistance from Sony, which makes the competing PlayStation console and has raised concerns with antitrust watchdogs about losing access to what it calls a "must-have" game title

"We've offered Sony a 10-year contract to make each new 'Call of Duty' release available on PlayStation the same day it comes to Xbox," says Smith. "We're open to providing the same commitment to other platforms and making it legally enforceable by regulators in the US, UK, and European Union."

Reliance gets green approval for World's largest submarine cable

Reliance Industries Limited (RIL) has received approval from the Ministry of Environment, Forest and Climate Change (MoEFCC) to build submarine cable systems for high-capacity and high-speed internet connectivity from Mumbai to Europe and Asia. The cable systems, India-Europe-Xpress (IEX) and India-Asia-Xpress (IAX), are the largest globally and are expected to be ready between 2023 and 2024.

IEX in the Arabian Sea and open seas will connect Mumbai to Europe, with landings in the Middle East and Africa (Oman, Djibouti, Saudi Arabia and Egypt) as well as through the Mediterranean Sea with landings in France, Italy and Greece, further expanding to US Coast (East).
Meanwhile, IAX consists of 12 cable landings in five countries with the main trunk from Tuas (Singapore) to Mumbai and branches to Chennai, Matara (Sri Lanka), Satun (Thailand), and Morib (Malaysia).

The two cable systems will take off from Versova beach and Silver beach in Mumbai, respectively.

HOTSPOTS:

1. M. Visvesvaraya - Father of Indian Engineering
2. The Firefox logo isn't a fox...it's a red panda!
3. One Petabyte (PB) = 1024 (TB). To put this in perspective, a 50PB hard drive could hold the entire written works of mankind from the beginning of recorded history in all languages.

RIDDLES:

1. When Grant was 8, his brother was half his age. Now, Grant is 14. How old is his brother?

EDITORS

Tharun Raj G - 20BEC152
Abirami R - 21BEC005
Reesari R - 21BEC110
Saravanan M - 21BEC132
Sibi Varshith S - 21BEC141

Answer:
1. His brother is 10. Half of 8 is 4, so Grant's brother is 4 years younger. This means when Grant is 14, his brother is still 4 years younger, so he's 10.