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Issue-2

NewsLetter

DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING



GL BAJAJ

Institute of Technology & Management

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Guest Lecture On “Mobile Telecommunication- 4G & Beyond”

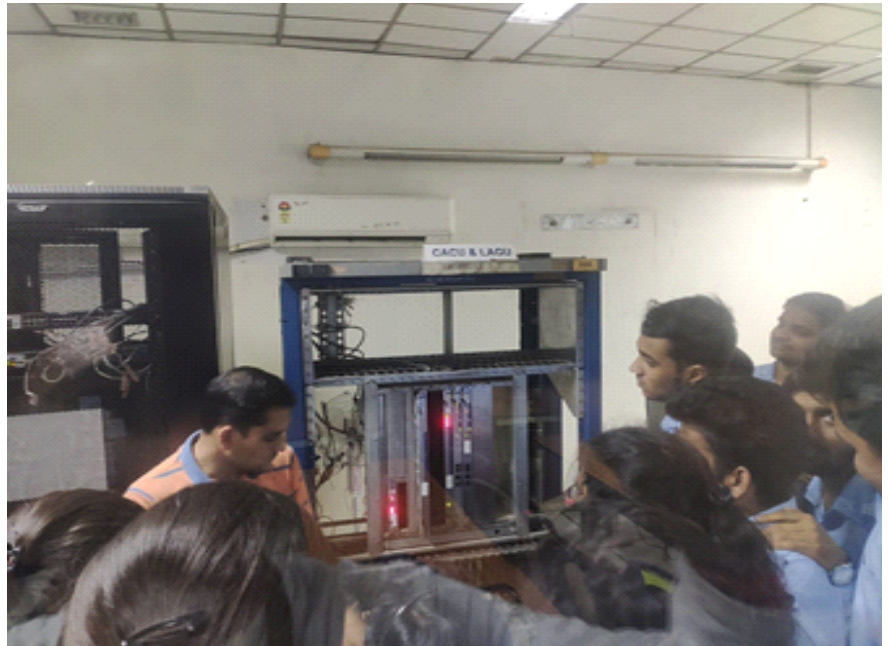
On 23rd September 2019 guest lecture on “Mobile Telecommunication- 4G & Beyond” by Mr. Abhishek Gupta, Senior Division Engineer of ALTTC, Ghaziabad, was arranged in the department of Electronics and Communication for 2nd year students of ECE, GL Bajaj Institute of Technology and Management. Session includes introduction of mobile communication, all generations of mobile communication, GSM architecture, 4G and its working principles. With this session students became awareness of mobile communication and its working principles and what is beyond the 4G technology with some interaction with speaker. Finally concluded with queries solutions and followed by vote of thanks by HOD, ECE.



Industrial Visit At “ALTTC, Ghaziabad”.

On 01 oct 2019 an industry visit to ALTTC Ghaziabad was organized by the Department of Electronics and Communication Engineering. Total 120 students of ECE 3 year were involved in this visit. During this visit following technologies were explained practically:

- NGN Protocols
- C-DOT Max NG Networks
- Access / Core Connectivity of C-Dot Max NG
- IP Multimedia Subsystems Nodes
- IP Trunk Automatic Exchange (IPTAX)



Industry Visit to Productronica and Electronica India, 2019

Productronica and Electronica India 2019 events being organized at India Expo Mart, Greater Noida on 25-27 Sep 2019. Student of 2nd and 3rd year of ECE Department visited the Expo on 26th Sept 2019.

“International trade fair for electronic components, assemblies and materials” electronica India is the leading trade fair for the electronics industry in India. It provides you with an overview of the entire spectrum of the electronic components industry & gives you a new drive for your business success all under one roof. On the other hand, Productronica India is the only event of its kind in South Asia to showcase the entire value chain in electronics production from technologies & production equipment to software & services.



TECHBLITZ 2K19

On 30th August 2019, a technical event **TECHBLITZ 2K19** was organized by department of Electronics and Communication engineering. In which there were three sub events as **TECHQUIZ**, **CIRCUIT HACKATHON** and **E-CROSSWORD** for inter & Intra College. A total of 320 students participated in the whole event from various branches and college. As Students participated with full enthusiasm and good spirit. During the event Circuit Hackathon was organized for the inter-college event.

1.TechQuiz: judged by Dr. Amrita Rao, Dr.Shilpa Choudhary and Mr.Amiya Prakash.

Winner: Vaibhav and Varun (3rd yr,ECE,GLBITM)

1st Runner up: Chandrima and Aditya (3rd yr,ECE,GLBITM)

2nd Runner up: Rishabh and Najamuddin (3rd yr,ECE,GLBITM)

2. Circuit Hackathon: judged by Mr. Dharmendra Nishad, Mr.Piyush Yadav and Mr. Puneet Kumar Mishra.

Winner : Dheeraj Kumar and Harsh Raj (3rd yr,ECE,GLBITM)

1st Runner up : Kunal Gupta and Kamalakar Srivastava (2nd yr,ECE,NIET)

2nd Runner up : Ayush Rastogi and Aditya Singh (2nd yr,ECE,GLBITM)

3. E-Crossword: judged by Dr. Krishna Kant Singh and Mr. Pradeep Kumar Bhardwaj

Winner : Sahil and Rishabh (2nd yr,ECE,GLBITM)

1st Runner up : Shreya and Prince (2nd yr,ECE,GLBITM)



Innovation Week



On the birth anniversary 15th October 2019 of Dr.A.P.J.Abdul Kalam the students of G.L.bajaj Institute of Technology and Management had conducted some events to give tribute to him .

The week was celebrated as the innovation week. The Electronics and Communication Department conducted the event " Poster Making " (HandWritten or Digital).

There were 40 students who took part in this event. All of them were from E.C.E. Dept. The Event was held under the guidance of Dr.Amrita rai.

There were 3 Judges Mr. Piyush Yadav, Mr. Puneet Mishra, Mrs. Shylaja V. Katarangi.

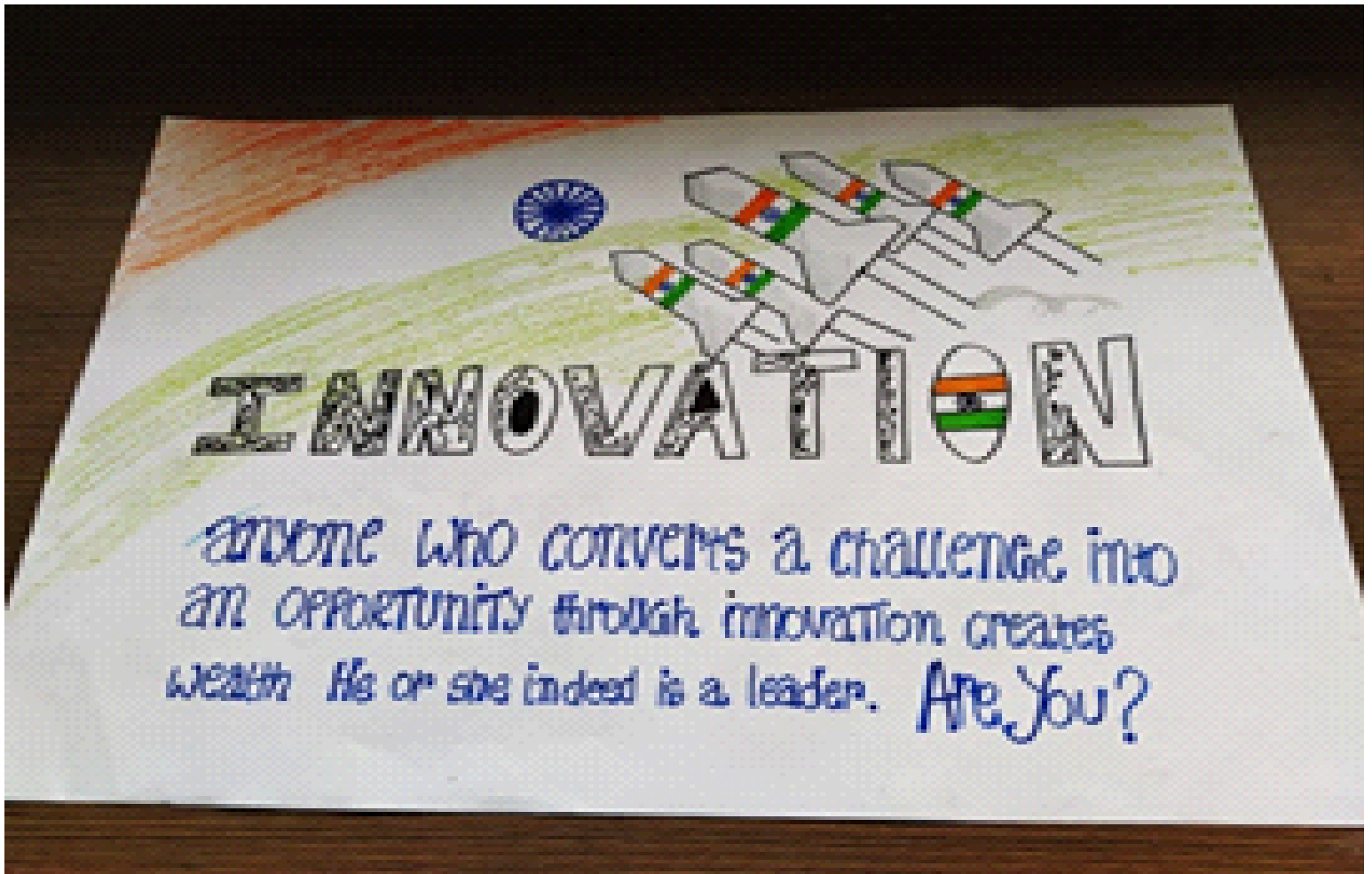
There were 3 winners from the Handwritten side: -

- 1.Arun Chaudhary, 3rd yr.
- 2.Athrava Pratap Singh, 2nd yr.
- 3.Anjali Sharma, Yuvraj Singh, 2nd yr.

There were 2 winners from the Digital side: -

- 1.Abhishek Kumar Rai, 3rd yr.
2. Pulak Anand, 3rd yr.

Students Coordinators well managed the event in the department of ECE. Duration of the event was about 1.30 hrs and it ended successfully.





Meet Up “Women in IoT”

The 2nd 'Women In IoT' event on 9th August 2019 @ Aeris Communications, Noida. **“Women in IoT”** is a knowledge engagement platform for the women technologist working in the field of the Internet of Things technology to share their Work experience and Original ideas, Meet like-minded professionals, engage in meaningful discussions and Network. The primary focus of discussions is on IoT solutions in automotive space.

The poster features a central image of two women looking at a laptop screen, with the text "WOMEN IN IOT" overlaid. The background is a collage of hexagonal shapes, some containing images of people. The Aeris logo is at the top center. On the left, a blue hexagon contains the date "9th august". Below this, on a blue background, are icons for a location pin, a clock, and a globe, followed by the text "V 2.0", "9TH AUGUST > 3 PM - 6 PM", and "AERIS.COM". At the bottom left, it says "AERIS COMMUNICATIONS" and "SECTOR 63, NOIDA". At the bottom right, the text "COMMIT CREATE CONNECT" is displayed.

aeris

9th august

WOMEN
IN
IOT

V 2.0

9TH AUGUST > 3 PM - 6 PM

AERIS.COM

AERIS COMMUNICATIONS
SECTOR 63, NOIDA

COMMIT
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Nukkad Natak

On 26 August 2019 Department of Electronics and Communication Engineering organized a Nukkad natak . Theme of Natak was road safety awareness. Students of various department such as ECE, CS, IT were involved in the road safety act which was perfectly executed in front of large audiences. Students successfully communicated the information about the road safety among and the audience. Whole event was done successfully.



Awareness Program on Road Safety at DPS Greater Noida

On 8th November 2019, Department of Electronics and Communication Engineering conducted an **Awareness Program on Road Safety** at **DPS, Greater Noida**. Awareness session was conducted for three classes i.e. 8th, 9th and 10th. Students were very keen to know about the details of road safety rules. A questionnaire round was also conducted followed by the awareness session in which prizes were distributed to the winners. Information about the road safety was successfully communicated and the whole event was done successfully.



Abhivyakti-2K19

On 27th September 2019, an intercollege dance competition was organized by Department of Electronics and Communication Engineering. Total 37 students participated during this competition from GLBITM as well as from other colleges. Nandini Chaudhary (GLBITM) won the solo dance competition and was followed by Mahesh Bisht (Galgotias) and Tannu Singh (GLBITM) as first and second runner up. Dance group from Galgotias college won the group dance competition which was followed by groups from KCC college and GLBITM college as first and second runner up respectively.



Teachers Day Celebration

On 05th September 2019 teacher's day celebration was in Department of Electronics and Communication Engineering. Students express their gratitude and appreciation for their teachers on this day. The whole function was planned by third year students. They performed various activities on this occasion. The H.O.D and faculty members were overwhelmed by the efforts and love shown by the students.



DEPARTMENT OF ECE



Student Corner

Anticipations from Artificial Intelligence in 2020

Since years, the concept of artificial intelligence (AI) has immensely required creative interpretations of scientific theory to attract people's attention. Whether it was the overwhelmingly capable character Data from "Star Trek", from "Star Wars," or any other sci-fi AI manifestation, the fact still stands that intriguing forms of [artificial intelligence](#) have basically been relegated to the entertainment world until only recent years, and is expected to expand in fields unheard of. Here is a composition of 5 such fields where we can anticipate and expect A.I to be seen dominating in 2020, as the year advances.

1. Step- Forward in various means of Transportation - Any advancement in AI that could help curb the deadly incidents taking place by the thousands each day, on the various means of transport, will quickly be hailed as a success if A.I brings precaution to it. So it should come as no surprise that there are multiple ways that companies are investing to bring the structured order of [artificial intelligence](#) to the chaotic world of transportation. One way this is taking place is through the competition between companies like Uber, OLA and Google's Waymo to create the first commercially viable autonomous vehicle. However, while the concept of the self-driving car inches closer to reality each day; there are other, less obvious ways that AI is impacting the transportation sector as well. One of these is through railroad safety. Train crashes, while rare, often take place because of a failure to respond to the warning signs. Another way AI may soon be impacting transportation is through autonomous cargo ships. Japanese shipping companies [are working on an AI solution](#) that could take into account factors like the weather in order to plot the most efficient routes for cargo ships to keep accidents to a minimum.

2. Business administration and Finance YES! The field of business and management is not untouched by A.I these days. Finance and management is being advanced with help of A.I to provide better management outcomes. The field was earlier untouched by A.I and was entirely human managed. The ever-growing capabilities of [artificial intelligence](#) allow it to analyze large amounts of financial data in order to make predictive decisions in areas like the stock market. Not only can it provide the best options at this point, but it can tailor those options to meet the investment patterns of specific financial firms.

3. Human Fitness Healthcare is a sector ripe for artificial intelligence to make its mark — something those medical companies and professionals are well aware of. In fact, the healthcare world [invested \\$1.7 billion in AI in 2018 alone](#). The incredible infusion of investment has propelled multiple healthcare related AI applications forward, including, among other things: Diagnosing symptoms via intelligent emergency triage, Google's DeepMind machine to [diagnose diseases of the eye](#), Robotic surgery.

4. Digital image and Picture-edit. Another way that AI could be impacting our everyday lives soon is by automatically editing your photo at the moment it is taken. The technology would be able to enhance select portions of a picture (no more picture-wide effects or corrections necessary) [in less than 20 milliseconds](#). The blistering speed means users may be able to view the corrected image before they even snap the picture. When this technology emerges in its fully developed form, it could revolutionize the photography industry and relegate applications like Photoshop to an industry professional-specific tool overnight.

5. Smart City - One way that artificial intelligence is likely to have a magnified impact is by bringing together various AI-driven elements into a unified network, a concept commonly referred to as a "[smart city](#)." Once all of the various AI elements are in place, a city or region-wide network could bring them all together, helping each one function at peak efficiency and safety. AI-influenced things like transportation, water and power supplies, and public safety could all be gathered under one AI-powered net that organizes each one to maximum effect.

Vidit Shukla

III Year -ECE



Student Corner

Humanotics : Interaction between human and robotics.

Human-Robot Interaction (HRI), namely with robots and humans sharing a common workspace without fences on the factory floor and executing in collaboration a variety of useful tasks under safety premises. In fact, HRI features span several functional aspects that are of interest in many different applications: teaching and programming of robot actions can be made more intuitive and friendly, semi-automatic operation of manipulators for tackling very complex tasks is enhanced thanks to on-the-fly human intervention, and operators may closely monitor the quality of products by working side-by-side with robots. As a result, collaborative robotics has been considered one of the enabling technologies of the fourth industrial revolution, within the Industry 4.0 program and beyond. Recent research results on human-robot interaction and collaborative robotics are leaving behind the traditional paradigm of robots living in a separated space inside safety cages, allowing humans and robot to work together for completing an increasing number of complex industrial tasks. Recently there has been work on surgical robots that has been used or tested in vivo, focusing on aspects related to human-robot interaction. They present the general design requirements that should be considered when developing such robots, including the clinical requirements and the technologies needed to satisfy them. They also discuss the human aspects related to the design of these robots, considering the challenges facing surgeons when using robots in the operating room, and the safety issues of such systems. They then survey recent work in seven different surgical settings: urology and gynecology, orthopedic surgery, cardiac surgery, head and neck surgery, neurosurgery, radiotherapy, and bronchoscopy. In the end, the question of control between human and machine is not a binary one. It's a gradient. This means we will need to think deeply and decide — for each particular case of artificial intelligence and robotics — what we want to retain control of, and how much. In my opinion this is not a technical question for engineers and computer scientists, but one for society at large.

kashish Srivastava
III Year - ECE



Student Corner

Space Elevator : An idea whose time is coming.

Right now the only way to see our little blue marble from the space is to be an astronaut or a billionaire. But not all hope is lost. A growing number of scientists and technology enthusiasts are looking into ways to construct a huge elevator, either on Earth or the moon, that could transport cargo and humans to and from space. Truth be told, we have always strived to reach the heavens. But it's hard to get to space. Unless we build an elevator that goes beyond the blue skies. The idea isn't exactly new. The first mention of a space elevator was in 1895 when a Russian scientist — Konstantin Tsiolkovsky, was inspired by the Eiffel Tower to create a tower that reached all the way to space. His concept never became a reality because there was no substance that could hold the weight of a tower that was over 35,000 kilometers (about 22,000 miles) tall. The idea is relatively simple: a cable is stretched from a satellite counterweight above the geosynchronous orbit, where it's attached to a floating anchor station at the equator. The cord is able to stand up on its own by centrifugal force, allowing a car to travel along the cable, directly from Earth to a space station. NASA and space agencies in Japan and China have been working on this version of the space elevator for years. Japanese construction firm Obayashi Corporation has promised to have its version up and running by 2050, estimated to cost \$90 billion. The Japanese team that Obayashi is working with has even conducted its first trial, blasting off a miniature version on satellites to test the technology. In a fully realized space elevator, an incredibly strong cable would attach an orbital platform to the surface of the Earth. Electrically powered vehicles (usually referred to as “climbers”) would ride this cable from the ground, through the atmosphere, and directly into space. No rocket engines, no G forces pinning you to the seat. No flying at all, really. Just a smooth vertical ride at a leisurely pace of 200 hundred kilometers per hour or so. Physically it would be an easy trip, free from the rigors of a traditional space launch. But it certainly wouldn't be a quick one. For the space elevator to work, the “top floor” needs to be in what's called a geostationary orbit. This means that the platform's orbital period would match Earth's rotational period, giving the appearance (from our perspective on the surface) that it's hovering motionless above us. This is the same orbit that many communications satellites are placed in, as it negates the need to actively track them across the sky. The problem is, geostationary orbit around Earth is at an altitude of 36,000 km (22,370 miles). At 200 km/h, it would take over a week for a climber to reach that altitude. Its a tall order, basically.

Mukul sharma
III Year(ECE)



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Shreya Dubey - II year



VISION

To become a department of repute and prepare globally competent and socially responsible professionals with holistic knowledge and technical skills.

MISSION

- ✓ To provide a supportive environment for effective knowledge transfer and nurturing ideas.
- ✓ To equip students with technical and leadership skills, and abilities to face the global challenges.
- ✓ To create an environment conducive for research and development with continuous involvement of industry.
- ✓ To inculcate professional and moral values in the students.

Program Educational objectives (PEO)

On completion of this course, our graduates will be able to

1. Exhibit multi-disciplinary technical and leadership skills for better employability, higher education and entrepreneurship.
2. Possess strong knowledge in the field of Electronics and Communication Engineering to develop solutions for real life problems.
3. Undertake professional responsibilities through strong team-work, communication skills and life-long learning.
4. Become socially responsible professionals with moral values and ethics.

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Plot No. 2, Knowledge Park III,
Greater Noida, Distt. G.B. Nagar, U.P., India-201306