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Issue-1

# News Letter

DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING



**GL BAJAJ**  
Institute of Technology & Management

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## Circuits and Logic Design Competition



Circuit and logic design competition was organized by GLBITM-ICEIT STUDENT CHAPTER, Department of Electronics and Communication on 3<sup>rd</sup> March 2017 in which a total of 29 teams participated in both the competitions out of which 5 teams were from various other colleges as well. Students participated with full enthusiasm and good spirit. The competition took place in two stages in which first stage included the written objective test and the selected teams were allowed to participate in the second stage where they have to implement the circuit design practically.

### Circuit Design Competition

WINNER : Ashutosh and Abhinav (NIET College)  
RUNNER-UP: Tripti and Harsh (GLBITM, Gr. Noida)

### Logic Design Competition

WINNER : Himani sharma and Kriti sharma  
(GLBITM, Gr. Noida)



## Workshop on Digital Design using Verilog



Electronics and Communication Department organized a 2-day workshop from 21<sup>st</sup>-23<sup>rd</sup> January 2017 on “**Digital Design using HDL**” in association with **True Chip Solution Pvt. Ltd.** 2<sup>nd</sup> year students were provided with a platform through this workshop where they can enhance their knowledge and learn about the latest technology being used today and can utilize it for future work. Students learned basics and were also provided with assignments and project to be completed in the workshop.



## Workshop on Digital Design using Verilog



The workshop took place in two sessions. In first session along with course contents they gave exposure to students about core electronics companies, where students can move for job opportunities while in second session hands on practice on Xilinx were done by students. Students attended the workshop with great enthusiasm and learnt about the latest trends being used today in technology.

## Guest Lecture on Career Opportunities in Medical Electronics

An expert lecture on Career opportunities in Medical Electronics was organized by ECE Department of GLBITM, Gr. Noida on 13<sup>th</sup> January 2017, Mr. G P S Shekhawat, Director, Horizon Meditech provided his views about the future of medical electronics and encouraged students to expand their career options as well as interest in this field for future growth.

The ultimate aim of the guest lecture was to explain and also to make student understand & realize how far the electronics is involved in medical field and also the contribution of electronics and communication department in medical field.

Students were provided with the knowledge about Medical Electronics which covers recent advances in the growing field of biomedical technology, instrumentation, and administration. Contributions focus on theoretical and practical problems associated with:

- The development of medical technology;
- The introduction of new engineering methods into public health;
- Hospitals and patient care;
- The improvement of diagnosis and therapy;
- Biomedical information storage and retrieval.

The event went a great success under the support of our department staff members.

## Ideation Challenge 2017



'IDEATION CHALLENGE' was one such platform given to the students through which they can present their idea in mind which can work for the benefit of society. Winning teams were awarded a support of upto Rs. 50,000 to be given as seed fund in various forms for investing on their ideas and projects. Event was a great success as many students with their respective teams participated in the event and brought their ideas on board which was innovative and very beneficial for the society. Students from different branches i.e. Computer Science Engineering, Mechanical Engineering,

Electrical and Electronics Department and Electronics and Communication Department participated in the ideation challenge and presented their ideas in form of PowerPoint presentation and the best among them was provided with the prizes. Ideation challenge event was completed with huge enthusiasm and with the collaboration of different departments.



## Project Open Day



Electronics and communication department organized an open day evaluation for final year students on 6<sup>th</sup> may 2017, which gave them opportunity to display their projects and explain their importance and future scope of the technology they are working on.



## Project Open Day



Projects were evaluated by the panel and among all the projects been displayed by the students, few projects were selected which were appreciated for their good work and supported by the college to be brought to next level of advancement.

## Industrial Visit at Horizon Meditech



On February 23, 2017 the department of ECE of G L Bajaj organized an industrial visit for 3<sup>rd</sup> year students to industry named HORIZON MEDITECH in B-6, sec 88, phase III, Noida. we were addressed by the one of the employee about the industry. He said and I quote "Horizon Meditech private limited is a private incorporated on 3 march 2011, it is classified as non-govt company and is registered at Registrar of companies Delhi. Its authorized share capital is Rs 200000 and its paid up capital is Rs 100000. It is involved in the manufacture of medical equipment and other chemical products." Then students were given brief information about quantum physics and their use in medical equipment. They categorized the medical equipments in 3 parts namely:

1. Static equipment's – In this the machine is fixed at one position and the patient is to be taken to the machine.
2. Moveable equipment's – In this machine is free to reach to patient.
3. Static and moveable both- In this, it depends on the situation it then either of above two situation are follow.

Then brief information about different machines in field of medical such as :

1. ECG machine – used for electrocardiogram.
2. EMG machine – used for electromyography.
3. EOG machine – used for electroctogram.

## Industrial visit at NISWA



On February 23, 2017 the department of ECE of G L Bajaj organized an industrial visit for 3<sup>rd</sup> year students to industry named NISWA on 59/2/12, Sansar Fan Compound, Site-IV, Industrial Area, Sahibabad, Uttar Pradesh 201010. Industry developed as the renowned manufacturer, supplier, trader and exporter of a wide range of Electrical Products, We have marked a dominant niche in the market and manufacture a large range of Electric Panels which are widely appreciated for their features like highly durable, long service life, reliable performance, low maintenance and effectiveness.

Apart from these, firm has established trustworthy and reliable relations with the leading channel partners of the industry namely, Parker, Fuji Electric who provide us wide a vast assortment of Power Conversion System, Rotary Gear Heads, Steering, etc.

All the products of the NISWA attain a large market stake and on the basis of this qualitative array they have grabbed a large client base. Team of professionals dedicates their complete efforts to serve their clients with the best and they strive to continue the same in the long run.



## Industrial Visit at Havells



On March 4, 2017 the department of ECE of G L Bajaj organized an industrial visit for 2<sup>nd</sup> year students to industry named HAVELLS 14/3, Mathura Road, Pocket B, Sector 27, Faridabad, Haryana 121003 under the guidance of Dr. Amit Sehgal, Mr. Arvind Kr. Singh and Mr. Govind Sharma. About 30 Students of the Department visited Havells India Ltd. to interact with industry to understand latest demanding technologies. The Technical Head of Havells India Ltd. conducted very informative session for the students .He also guided the students about:

- Building Circuit Protection · Miniature Circuit Breaker · Industrial Circuit Protection · Motors
- Professional and Consumer Lighting · LED Lights and Bulbs · Small Domestic Appliances etc.

The session was concluded with question - answers session. Many of the students asked different questions to the Technical Head on current technologies, market scenarios etc. It was an informative, interesting and a successful visit .



**Student Achievement**

*Heartfelt Congratulations!*



**KAJAL SHRIVASTAVA**

**₹ 10 Lacs**

A grant Received from Government of India  
for her idea 'Nadi Horoscope'.

**Kajal srivastava**

student of 3<sup>rd</sup> year

**Electronics and Communication Department**

received a grant of **Rs. 10 lacs**

from **Government of India**

to work on her research in the area of ayurveda

and her idea about **NADI HOROSCOPE**



## Student Corner

### BLUE EYES TECHNOLOGY - HUMAN OPERATOR MONITORING SYSTEM

Blue Eyes system provides technical means for monitoring and recording the operator's basic physiological parameters. The most important parameter is saccadic activity<sup>1</sup>, which enables the system to monitor the status of the operator's visual attention along with head acceleration, which accompanies large displacement of the visual axis (saccades larger than 15 degrees). Complex industrial environment can create a danger of exposing the operator to toxic substances, which can affect his cardiac, circulatory and pulmonary systems. Thus, on the grounds of Plethysmographic signal taken from the forehead skin surface, the system computes heart beat rate and blood oxygenation.

The Blue Eyes system checks above parameters against abnormal (e.g. a low level of blood oxygenation or a high pulse rate) or undesirable (e.g. a longer period of lowered visual attention) values and triggers user-defined alarms when necessary. Quite often in an emergency situation operator speak to themselves expressing their surprise or stating verbally the problem. Therefore, the operator's voice, physiological parameters and an overall view of the operating room are recorded. This helps to reconstruct the course of operators' work and provides data for long-term analysis.

**Shobit Shakya**  
**B.Tech (IVth year)**  
**Department of ECE**

### BLOCK CHAIN TECHNOLOGY

A blockchain is a decentralized distributed public ledger that records, validates and secures transactions in a system. As is obvious from the name, a blockchain is made of several blocks. Each block contains encrypted data pertaining to a transaction, along with a hash that draws upon the previous block in the chain.

This way of connecting each cryptographically-hashed block with the previous one ensures that all data in the chain remains secure and unchanged. There is no single owner of any transaction –each transaction is authorized and backed by thousands of computers (called miners)- and so there is no single point that can be attacked or hacked.

That is what makes blockchain base transactions secure and tamper-proof. Using blockchain technology, it is possible to carry out peer- to- peer transactions over the Internet, without requiring middlemen like payment gateways to authorize transactions.

**Mahrosh Fatima**  
**B.Tech (1st year)**  
**Department of ECE**





## Student Corner

### QUANTAM COMPUTING

Quantum computing is the revolutionary idea which will soon turn digital world fast and easily accessible to every corner of the world. Instead of bits, which conventional computers use, a quantum computer uses quantum bits—known as qubits. These qubits can store both 0 and 1 simultaneously. To illustrate the difference, imagine a sphere. A bit can be at either of the two poles of the sphere, but a qubit can exist at any point on the sphere. So, this means that a computer using qubits can store an enormous amount of information and uses less energy doing so than a classical computer. By entering into this quantum area of computing where the traditional laws of physics no longer apply, we will be able to create processors that are significantly faster (a million or more times) than the ones we use today. Sounds fantastic, but the challenge is that quantum computing is also incredibly complex.

**Sumit Kumar**  
**B.Tech (1st year)**  
**Department of ECE**

## Editorial Board

<b>Convener</b>	: Dr. Amit Seghal HOD
<b>Editor</b>	: Dr. Dinesh Singh - Associate Professor
<b>Student Editor</b>	: Garima Singh - II year Akansha Joshi - 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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