



# GL BAJAJ

Institute of Technology & Management

FIND YOUR SPARK

# Insight

## Department of Information Technology

Bi-Annual Magazine

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- From HOD's Desk
- Technical Activities
- Industrial Visits
- Extra Curricular Activities
- Department Achievements
- Latest Trends
- Vision & Mission of Department
- PEOs & PSOs of Department



## Department of Information Technology

The Department of Information Technology at G.L. Bajaj Institute of Technology & Management was established in the year 2007 with a vision to develop competent IT professionals catering to the needs of Industry and society in a global perspective. The Department aims to foster students to attain professional excellence by providing exposure to new IT tools and technologies. Information Technology being the flagship branch of Engineering takes focus in scientific research, scientific programming, application programming, and software engineering. The Department has well-equipped laboratories with state-of-the-art hardware and software resources, lecture halls, seminar halls, tutorial rooms and faculty sections. The Department has a blend of experienced and young faculty members who also work as mentors to the equally diligent and hardworking students.

### From HOD's Desk

It's my pleasure to congratulate editorial team for continuing and presenting their interactive thought process in the form of magazine. It is a showcase of their research exertion, achievements as well as the reflection of all the creative and cultural activities happenings in the department. It gives me immense pride to know that our students possess immense potential and I am hopeful that the achievements of various students mentioned in this magazine will also inspire other students to excel in their lives, and for that they need to have vision in lives and determination to achieve it. An excellent job has been done by the Department Editorial Board in planning the magazine and publishing it. I extend my best wishes to the entire team for its future endeavours.

## PATRONS

Dr. RAM KISHORE  
AGARWAL (CHAIRMAN)

Mr. PANKAJ AGARWAL  
(VICE CHAIRMAN)

Dr. RAJEEV AGRAWAL  
(DIRECTOR)

Dr. P.C VASHIST  
(HOD – IT)

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Ms. ANIKA GUPTA

Ms. JULEE MISHRA

## VERTICALS

General Software  
Products

Computer Networks

Artificial Intelligence

Mobile Applications

## Technical Activities

### STUDENT DEVELOPMENT PROGRAM ON ENTREPRENEURSHIP

A workshop entitled “Student Development Program on Entrepreneur” is being organized by Information Technology Department in association with DST-NIMAT, New Delhi, from 24th - 26th July, 2018. More than 300 students participated and interacted in the sessions with the guests named:

Mrs. Manpreet kaul	NGF college Haryana
Mr. Tara Chand	TECXPERS
Mr. SK Verma	Ex. GM Syndicate Bank
Dr. Navaid Z Rizvi	GBU university
Mr. Kuver Pratap Singh	IBM, Noida

All were the great sessions; students enjoyed sharing ideas with each other and also got guidelines from the guests about how to proceed for becoming Entrepreneur.



## DIVISIONAL INNOVATION EXHIBITION

“Divisional Innovation Exhibition” - “A road map for innovation exhibition in the age of digital culture.” 27-july-2018. This exhibition is organized by Regional Science and Technology Centre, Ghaziabad. In Association with Dept. of Information Technology, G L Bajaj institute of Technology and Management. More than 100 students participated with their innovative ideas. Students were very enthusiast about the competition and they had presented their design through the help of model/PPT/Posters/prototype. In this competition there are three winning categories:

1. School Students (6-12 class)
2. Engineering Students
3. Grass Root.

Award distributed among the winners by our chief guest Shri. Awdesh Yadav, Project Director, DRDA, Gautam Buddha Nagar, Dr Suresh Chandra Sharma, Regional Scientific Officer, Ghaziabad.

At last, total 20 teams of students were selected later on they will be directly called by the DST for the participation at state level project competition



## INTERNATIONAL CONFERENCE ON COMMUNICATION AND COMPUTING TECHNOLOGY (ICCCT)

Department of Information Technology @ GL Bajaj institute of Technology and Management organized a Two Days International Conference on 'Communication and Computing Technology' on 7th & 8th September, 2018.

Day one started with lamp lighting by the Chief Guest Shri Omveer Singh, CERT, Ministry of Electronics and Information Technology, New Delhi, Dr. Neeraj Sharma, advisor, Department of Science and Technology, New Delhi, Prof. A.K. Misra, MNNIT, Allahabad, Prof. M.K. Soni, Pro VC, Manav Rachna University, Faridabad, Dr. Rajeev Agarwal, Director, GLBITM and Dr. P.C. Vashist, Head (Department of IT) and other esteemed guest which was followed by the release of conference proceedings.

Director of the institute, Dr. Rajeev Agarwal welcomed the guests and appreciated Dept. of IT for organizing the conference successfully in such a short span. In his address, Conference Chair Dr. P.C. Vashist, elaborated upon the theme of the conference. Plenary talks were given by Shri Omveer Singh, wherein he spoke on Cyber security and Prof. A.K. Mishra delivered a lecture on Hacking. About 100 research papers were received from various organization and institution from across the world in which 55 best quality papers were selected and presented by participants.

Day two of conference witnessed technical sessions. The best paper and young researcher awards were given in the valedictory session of the conference. Conference concluded with a vote of thanks given by Prof. Pushpa Choudhary, Organizing Secretary of the conference.



## EXPERT TALK ON EMERGING TREND IN IMAGE PROCESSING & COMPUTER VISION

An expert talk on Emerging trends in Image processing and computer vision by Dr. Goutam Sanyal, Head of NIT Durgapur, was organized on 11<sup>th</sup> September 2018 by the Department. During the session he discussed about: the latest trends in imaging science which at its core consists of three intertwined computer science fields, namely: Image Processing, Computer Vision, and Pattern Recognition. He also discusses novel applications that can benefit from image processing, computer vision and pattern recognition such as computational biology, biometrics, biomedical imaging, robotics, security, and knowledge engineering.



## LECTURE ON "OUTCOME BASED LEARNING AND IT'S NEED"

Department of Information Technology has organized an Expert Lecture on "Outcome based Learning and its Need" on 20<sup>th</sup> September 2018 given by following experts

1. Dr. P.C. Vashist, Hod (IT)
2. Dr. Rajeev Agarwal, Director (GL Bajaj)

Faculty from all other departments has come to join the session. Expert offer a new perspective to the topic and exposes faculty members to teaching drawn from real-life experiences, which in turn helps them better retain what is Outcome based Education



## SEMINAR ON “CRIME WRITING SESSION”

A one day Seminar on “Crime Writing Sessions” was organized on 19<sup>th</sup> September 2018 by Department of Information Technology of G.L Bajaj Institute of Technology and Management, Greater Noida. The seminar was inaugurated by welcome address of Dr. Rajeev Agarwal - Director G.L Bajaj and other invitee. The seminar was attended by more than 200 students and faculty of different departments. The esteemed and acclaimed guests for this event were: Mr. Neeraj Kumar (former police commissioner) and Kulpreet Yadav (retired voluntarily from the armed forces and Crime fiction author). The event was extremely engrossing and captured the minds of our young dynamic students.



## EXPERT TALK ON “RESEARCH ETHICS”

On 28th September 2018 an expert talk on Research Ethics by Dr. Kailash Srivastava, Vice Chancellor of Symbiosis University was organized by Information Technology Department of GL Bajaj institute of Technology & Management, Greater Noida. During the session he discussed about: the scope and various plausible areas for researchers in Science and Technology field at post-graduation and doctoral levels. Also discusses the policies and ethics that must be followed while writing any research paper. Overall the session was proven to be very inspiring and informative for students as well as faculty members.



## TECHNOKRITI 2018

The Techno-Cultural fest, Technokriti 2018, was organized with full fervor and zeal by the Innovative and Creative cell of GL Bajaj on 12<sup>th</sup> -13<sup>th</sup> October 2018. Brands like PAYTM, HACKEREARTH, CERTSTORE and CAREER LAUNCHER were the sponsors of the event. With more than 40 fun filled yet brain numbing, adventurous events and activities the fest offered 2 days of full fervor as the participants exhibited great enthusiasm all around and participated with great passion. Technokriti marked its end with the prize distribution for the winners of the various events; the prize distribution ceremony was organized on the second day i.e. on 13th October 2018.

The department of Information Technology along with their coordinators succeeded in organizing the various events like:

QUIZ

PHOTOSHOP

SHORT MOVIE

PUZZLE

LAN GAMING

BLIND TYPING



## EXPERT TALK ON “INFORMATION SECURITY”

An expert talk on Information Security by Prof. Souvik Bhattacharya from The University of Burdwan, was organized on 25<sup>th</sup> October 2018 by the Department. During the session he discussed about: Cyber Crime and Cyber Security mechanisms and tools with some live examples. The objective of the Guest lecture was to enlighten the students with the advanced technology in the Cyber Security. He also gave introduction to what Block Chain is and how important it is going to be in the near future.



## Industrial Visits

### INDUSTRIAL VISIT AT MICROSOFT INDIA

The Department of IT had organized an industrial visit for student to Microsoft in Gurugram on 7<sup>th</sup> July 2018.

Microsoft India Private Limited is a subsidiary of American software company Microsoft Corporation, headquartered in Hyderabad, India. The company first entered the Indian market in 1990 and has since worked closely with the Indian government, the IT industry, academia and the local developer community to usher in some of the early successes in the IT market.

Students of 3rd year and 4th year visited this company on-site training sessions on Project Development Life Cycle .Microsoft is providing unique and strategic e-solution and ERP services like-Web Designing, Website Development, Mobile App Development etc.



## INDUSTRIAL VISIT AT BARCLAY'S LIMITED

The department of IT organized an industrial visit for 2nd year students to BARCLAYS on 7<sup>th</sup> September 2018 for Cyber Security Training. From funding the world's first industrial steam railway in 1819, to unveiling the world's first automated teller machine in 1967, Barclays has had a string of firsts to its credit in its more than 300 years of history. In India, Barclays plc is one of the largest UK employers and employs over 23,000 people spread across its banking, technology and shared services operations. In 3 hours rigorous training students were exposed to learn various security measures taken over the social websites regarding passwords, Content sharing etc.

### Training Highlights:

- Importance of Cyber Security in Our Daily Life
- Data Security & Hide Techniques
- Spyware, Key logger & Virus Security
- Internet Surfing & Download Security
- Email Security & Social Networking Website Security- Phishing Attacks
- Browser Privacy & Security
- Live projects



## Extra-Curricular Activities

### FRESHER'S ORIENTATION PROGRAM

An orientation program for the newly admitted students of B.Tech, MBA and MCA has been conducted on 9<sup>th</sup> July 2018. The program envisages sensitizing the students on various activities of the institute including Academics, Research, Discipline, Co-curricular and Extra Curricular activities.

On the very first day Director of the Institute along with the HODs of the various departments addressed the students and the students also witnessed local tour to the nearby areas. In the week long program, Experts will handle various sessions on ragging, the power of emotional intelligence, motivation and mentoring, developing smart personality with high-level competencies, transactional analysis, cybercrimes, prospects of engineering and management courses, etc. Counseling sessions and group task are also the part of the program.



### AMUBRAL-POSTER PRESENTATION

IT department has organized an event which was held on 26<sup>th</sup> July 2018. It includes two sub events:

1. POSTER PRESENTATION: In this event there were 20 teams and out of those 20 teams 3 were selected.
2. INNOVATIVE IDEA WITH A PROTOTYPE: In this event there were 10 teams who have presented their idea out of which 3 teams have selected whose idea was really innovative and unique.

The event judge by the following judges:

- Dr. Rajeev Agarwal(Director sir)
- Dr. P.C Vashisth(HOD-IT)
- Mr. Piyush Yadav (EC dept.)
- Dr. Rupali Pramanik(HOD-Humanities)
- Mr. Vinod kr. Yadav(ME dept.)
- Mr. Akhilesh Kumar Singh (IT Dept.)



## TREE PLANTATION DAY

The Plantation day was carried out by Department of Information and Technology on special occasion of Teachers Day i.e. 5<sup>th</sup> September 2018. A Team of students with faculty members, planted saplings to make our environment green. Planting trees are important to make our environment green and pollution free.



## ANNUAL PARENT'S MEET- SAMAVESH

The annual Parent's Meet-SAMAVESH 2018 was organized by the Department of Information Technology on 8th September 2018. The meeting started with the welcome address by Head of the Department, Dr. P.C Vashist. He briefed the gathering about the activities and also explained how the department offers the best possible learning environment for the students. Subsequently student's attendance, academic performance and other special programs have been briefed to the parents. Different strategies regarding academics and planned activities was discussed with the parents. Lastly, we were pleased to listen to the parent's feedback and assured them that necessary actions will be taken bounded within the department's powers.



## FELICITATION TO BRIGHT STUDENT AND UPLIFTING OF WEAK STUDENTS

“A true success of any institute is counted through the values and the thirst for knowledge it has been able to imbue in its students”.

Felicitation ceremony was conducted on 25<sup>th</sup> September 2018 to honor the ones who brought laurels to the institute by achieving great in different genres of learning .The ceremony aimed to reward students who secured maximum aggregate during the session 2017-2018 . Students were awarded with merit certificates and a cash prize as a token of reward.

Along with, the IT department also rewarded those students who have been active for the session, who performed splendidly and maintain a form of punctuality by attending the college enthusiastically. Under this felicitation ceremony, there were many more activities to cherish the moment and lighten up the atmosphere. Mentors were there to guide the students for choosing the path that leads to success.



## Department Achievements

### E-GAUSHALA

Sarthak Verma, student of Information Technology Department has developed a platform named "e-gaushala". e-Gaushala is a new online concept which enables donors from anywhere in the world to easily contribute to various gaushalas in India and elsewhere, all in just a click. Better yet, as a donor you can use this interactive map to find and view a gaushala, either virtually or in person, and see firsthand the impact you are making.



### UNNAT BHARAT ABHIYAN (UBA)

Department of Information Technology of G.L. Bajaj is participating in the Unnat Bharat Abhiyan (UBA) and adopted the following villages for the development in collaboration with district administration:

1. Basi
2. Maharampur
3. Pawla Begmabad
4. Dhikoli
5. Sadpur Kalan

Unnat Bharat Abhiyan (UBA), a flagship programme of Ministry of Human Resource Development (MHRD), Govt. of India, is an opportunity to enable faculty and students of higher educational institutions to work with the people of rural India in identifying development challenges and evolving appropriate solutions for accelerating sustainable growth of village.

### FACULTY ACHIEVEMENT

Best paper has been selected in *AKGEC International Journal of Technology* on '**Automatic Facial Feature Point Extraction by Using Harris Algorithm**' by Dr. Pushpa Choudhary, Prof., Information Technology.

## Latest Trends

### The ‘humanized’ internet

The evolution of modern connectivity is often summarized as: the internet – the World Wide Web – mobile devices – big data/the cloud – the internet of things. For the next stage, it seems inevitable that even more personalization will be an important component. What we refer to as the internet of things will be central. However, more than simply connecting humans with devices, the next stage in connectivity will include “humanized” interfaces that constantly evolve to understand the user’s patterns and needs and, in a sense, self-optimize. This would include the functions and features on our devices, as well as the selection/curation of information we receive. It may not be the kind of artificial intelligence found in science fiction, but I expect this injection of personalization will bring monumental changes as our level of connectivity continues to grow.



### Printable organs

Today, we are already at a turning point in our ability to 3D “bioprint” organ tissues, a process that involves depositing a “bio-ink” made of cells precisely in layers, resulting in a functional living human tissue for use in the lab. These tissues should be better predictors of drug function than animal models in many cases. In the long-term, this has the potential to pave the way to “printing” human organs, such as kidneys, livers and hearts. By 2020, our goal is to have the technology be broadly used by pharmaceutical companies, resulting in the identification of safer and better drug candidates and fewer failures in clinical trials.



### Ultra private Smartphones

As concerns over personal privacy grow, particularly in terms of new technology, a Maryland-based company seeks to provide an alternative. Silent Circle, encrypts clients’ voice calls, text messages, and file attachments. Encryption prevents potential eavesdroppers from listening in on phone calls and protects metadata. Silent Circle has big plans for the future including a secure smartphone called Blackphone. Blackphone will utilize encryption tools currently used by Silent Circle, as well as other software that will help secure data

## **VISION OF DEPARTMENT**

To develop competent IT professionals catering to the needs of Industry and Society in a Global perspective.

## **MISSION OF DEPARTMENT**

To attain academic & professional excellence with collective efforts of all stake holders through:

**M1:** Dissemination of basic concepts and analytical skills.

**M2:** Exposure to new tools in the area of Information technology.

**M3:** Effective interaction with industry for better employability.

**M4:** Inculcating values and professional ethics with social responsibility.

## **PROGRAM EDUCATIONAL OBJECTIVES (PEO'S)**

**PEO1:** To provide students a strong foundation in mathematical and IT fundamentals with emphasis on different programming languages/ platforms.

**PEO2:** To prepare students with a strong foundation in IT tools and analytical skills.

**PEO3:** To analyse, design and develop efficient and cost effective IT solutions for society.

**PEO4:** To become a successful professional in software industry with leadership quality and value.

**PEO5:** To provide a supportive academic environment and guidance for life-long learning.

## **PROGRAM SPECIFIC OUTCOMES (PSO'S)**

**PSO 1:** An ability to design and development an application/ product that efficiently utilized system software and hardware to Cover current user requirement in socially and economically form.

**PSO 2:** To apply and acquire knowledge of computer network in implementation of secure data communication and reliable Network system.

**PSO 3:** An ability to design and implement knowledge based discovery, machine based learning by using the concept of DBMS, soft computing, neural network, image processing and pattern recognition etc.

**PSO 4:** An ability to design and develop mobile based applications which uses the concepts of latest application system development technologies.