

June-July 2021 Issue

ITanium

Special Edition:
Quantum Computing

Department
of Information
Technology



IMS ENGINEERING COLLEGE, GHAZIABAD
NAAC Accredited with 'A' grade
Approved by AICTE, New Delhi & Affiliated
to Dr. A.P.J. Abdul Kalam Technical
University, Lucknow

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VISION & MISSION

IMS ENGINEERING COLLEGE

VISION

Our vision is to impart vibrant, innovative and global education and to make IMS the world leader in terms of excellence of education, research and to serve the nation in the 21st century.

MISSION

- To develop IMSEC as a centre of Excellence in Technical and Management education.
- To inculcate in its students the qualities of Leadership, Professionalism, Executive competence and corporate understanding
- To imbibe and enhance Human Values, Ethics and Morals in our students.
- To transform students into Globally Competitive professionals.



Department Of Information Technology

VISION

To impart futuristic technical educational and establish a department of excellence by preparing students to apply their knowledge and varied skills as a competent technocrat to contribute towards solving complex societal problems and thus building a peaceful and prosperous nation.

MISSION

M1: To impart quality engineering education so that they become perfect IT professionals by getting high quality of technical education, research, training, professionalism with strong ethical values.

M2: To educate students in such a way that they shape up their minds to ensure their productive career in industry and academia.

M3: To help students to excel in research and innovation that discovers new knowledge which enables new technologies and systems.

M4: To prepare students to become an industry ready IT professional by inculcating creativity, team spirit, leadership and ethical competence through industry-academia collaboration, continuous curricular, co-curricular and extra-curricular activities.



Department Of Information Technology

Program Outcomes (POs)

Engineering Graduates will be able to:

1. Engineering knowledge: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
2. Problem analysis: Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
3. Design/development of solutions: Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.
4. Conduct investigations of complex problems: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.
5. Modern tool usage: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.
6. The engineer and society: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.
7. Environment and sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.
8. Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
9. Individual and team work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
10. Communication: Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.
11. Project management and finance: Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.
12. Life-long learning: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.



PROGRAM EDUCATIONAL OBJECTIVES(PEO)

PEO1: Graduates of the program will be able to apply fundamental principles of engineering in problem solving and understand the role of computing in multiple disciplines.

PEO2: Graduates will learn to apply the various computational techniques & tools for developing solutions & projects in real world.

PEO3: Graduate will be employed as Information Technology (IT) professionals beyond entry-level positions or be making satisfactory progress in graduate programs.

PEO4: Graduate will be able to demonstrate that they can function, communicate, collaborate and continue to learn effectively, and ethically as a socially responsible information technology professional. They will contribute to the society by their professional capabilities through lifelong learning.

Program Specific Outcomes (PSO)

By the completion of program the students will have following program specific outcomes

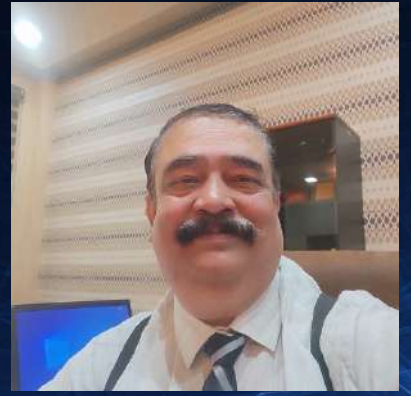
PSO1: Foundation of computer system: Ability to understand the principles and working of computer systems & information technology.

PSO2: Foundations of software development: Possess professional skills and knowledge of software design process. Familiarity and practical competence with a broad range of programming language and open source platforms.

PSO3: Foundation of mathematical concepts: Ability to apply mathematical methodologies to solve computation task, model real world problem, using appropriate data structure and suitable algorithm.

PSO4: Applications of computing and research ability: Ability to use knowledge in various domains to identify research gaps and hence to provide solution to new ideas and innovations.

Director's Message



Dr. Prabal K. Chakravorty
Director

अपने लक्ष्य की सफलता के लिए
इतना उद्यम करें कि सारी क्रायनात
उसे पूरा करने के लिए आपका साथ दे

~Dr. Prabal K. Chakravorty



HOD'S Message

The Department of Information Technology is working hard to accommodate the ever varying aspirations of the younger generation because of increasingly changing demand and development in industries. We are putting our efforts to accommodate these aspirations by fine tuning the teaching learning process and with many other developmental activities.



Dr S N Rajan
HOD-IT

Our goal is to maintain excellence in education and to get global recognition. It may sound idealistic, but this is precisely our long term goal. It is what motivates the work of everyone in the department. It inspires our teaching and research. It is this goal which fuels the faculty members to excel.

Our approach reflects the educational needs of the 21st century. We focus on our students by providing them with an outcome based education and hands-on experience through participation in innovative projects, research, training, and student forum activities etc. To keep abreast with the latest knowledge, we organize various activities related to interaction with experts from industries; encourage the faculty members to organize or to participate in faculty development programs, conferences, workshops etc. We believe in continuous development and even during the ongoing pandemic & lockdown period we strive to carry on the best efforts and endeavors towards the benefit of the students.

Our University results and placement speaks about our excellence with many of our students bringing laurel to the college by getting highest ranking in university exams and huge number of students are placed in national & multinational companies, moreover our students' creativity and determination is evident by this continuous success in various fields.



Student Achievement & Awards:

- Student participation & paper presentation in various National & International Conferences.
- Students awarded in various National Level Technical Project Competitions
- HACKATHON-2020 Screening
- Active participation in Cultural & CSR activities
- Active participation in Sports: Up to Zonal & State level

Innovation & Entrepreneurship:

- Students Innovative projects
- Demonstration in TECHNOVATION, HACKATHON -(SIH -2020)
- Regular interaction with Alumni Entrepreneur
- Participation in Entrepreneurship Awareness Camp(NIESBUD, Ministry Of Skills Development Government Of India)
- Startup Support(MSME)

IMS ENGINEERING COLLEGE

(NAAC 'A' Grade Accreditation, Affiliated to Dr A P J Abdula Kalam Technical University, Lucknow & Accredited by AICTE, New Delhi)

DEPARTMENT OF INFORMATION TECHNOLOGY

Campus:

Established in 2002,
NAAC Accredited with Grade 'A'
Approved by AICTE, New Delhi
Affiliated to Dr. A P J Abdul Kalam Technical University, Lucknow
Ranked 6th by TOI Survey



Department:

Quality focused & Global standard academic system
Highly qualified & well experienced faculty members
Faculty participation in research & Ph.D Programs
Excellent Placement Record
Departmental Club: InfoCorp , Techninjas 2.0
Departmental E-Magazine: ITanium
Alliance with RedHat Academy ,NPTEL, Local Chapter, NASSCOM, Amazon AWS, Adobe Spark, COURSERA

coursera

amazon
web services

aws

Adobe



Laboratories:

- Data Analytic Lab
- Geo-Spatial Lab
- Open Source Lab
- Data Warehouse & Big Data Processing Lab

Placement (2020-21):

TATA
CONSULTANCY SERVICES



Major Recruiters: IBM, TCS, Wipro, Accenture, Infosys, Genpact etc.

Highest Package: 7.5 L.P.A (IBM)

Companies Visited in Campus: 110(On/Pool Campus)

Placement Percentage: 80%

Infosys

Industry MOU:

RedHat Academy
Tevatron Technology
HANTECH
ICT Academy IIT-K Prutor



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IMSEC
Ghaziabad



B.Tech
MBA



The Times of India
ENGINEERING INSTITUTES
RANKING SURVEY 2020

**PROMOTING MERIT THROUGH
SCHOLARSHIP SCHEMES
EXCELLENT PLACEMENT RECORD**



QUOTABLE QUOTES

1.

- *"When we strive to become better than we are, everything around us becomes better too."*

-----Paulo Coelho

2.

- *"Unless you try to do something beyond what you have already mastered, you will never grow."*

-----Ralph Waldo Emerson

3.

- *"Happiness doesn't come from doing what we like to do but from liking what we have to do."*

-----Wilferd Peterson

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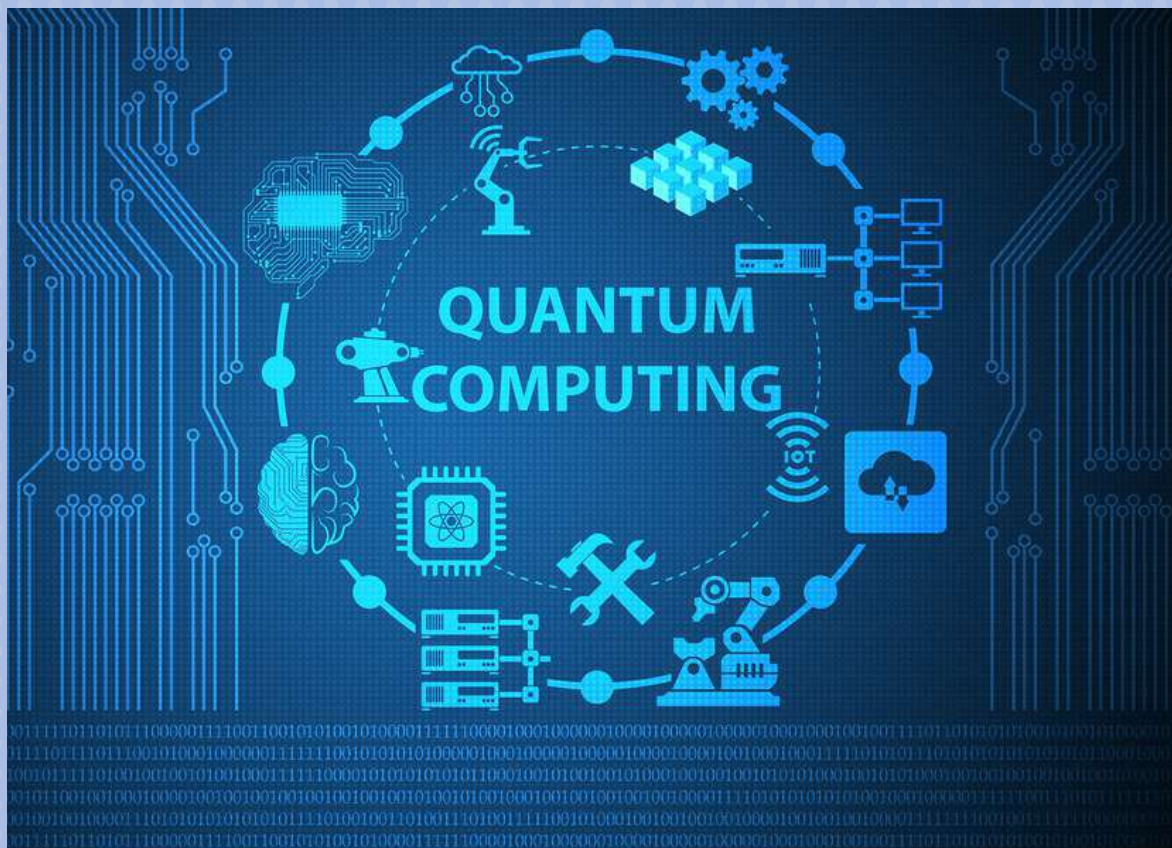


ARTICLES

"The Emerging Paths Of Quantum Computing"

The world of computing has witnessed seismic advancements since the invention of the electronic calculator in the 1960s. The past few years in information processing have been especially transformational. What were once thought of as science fiction fantasies are now technological realities. Classical computing has become more exponentially faster and more capable and our enabling devices smaller and more adaptable.

We are beginning to evolve beyond classical computing into a new data era called quantum computing. It is envisioned that quantum computing will accelerate us into the future by impacting the landscape of artificial intelligence and data analytics. The quantum computing power and speed will help us solve some of the biggest and most complex challenges we face as humans.



Qubit zoo: Quantum vocabulary and terminology

- **Qubits not bits.** Quantum computers do calculations with quantum bits, or qubits, rather than the digital bits in traditional computers. Qubits allow quantum computers to consider previously unimaginable amounts of information.
- **Superposition.** Quantum objects can be in more than one state at the same time, a situation depicted by Schrödinger's cat, a fictional feline that is simultaneously alive and dead. For example, a qubit can represent the values 0 and 1 simultaneously, whereas classical bits can only be either a 0 or a 1.
- **Entanglement.** When qubits are entangled, they form a connection to each other that survives no matter the distance between them. A change to one qubit will alter its entangled twin, a finding that baffled even Einstein, who called entanglement "spooky action at a distance."

Types of qubits. At the core of the quantum computer is the qubit, a quantum bit of information typically made from a particle so small that it exhibits quantum properties rather than obeying the classical laws of physics that govern our everyday lives. Several types of qubits are in development:

- **Superconducting qubits:** Already in use in prototype computers made by Google, IBM and others, these qubits are made from superconducting electrical circuits.
- **Trapped atoms:** Atoms trapped in place by lasers can behave as qubits. Trapped ions (charged atoms) can also act as qubits
- **Silicon spin qubits:** An up-and-coming technology involves trapping electrons in silicon chambers to manipulate a quantum property known as spin.
- **Topological qubits:** Still quite early in development, quasi-particles called Majorana fermions, which exist in certain materials, have the potential for use as qubits

Like other areas of science, there are competing theories on what constitutes quantum proof. But there are several very recent and exciting developments in this evolution that have created a pathway for this new era of quantum computing. This includes quantum breakthroughs from using light signals from networks of photons and quantum coding in silicon microchips.

Quantum Computer: A paradigm shift

Quantum computers represent a paradigm shift in computation. We are entering a fascinating period in the development of quantum computers. Quantum systems are scaling up in both size and reliability and are getting close to showing a real advantage over classical computers

Quantum computers represent a paradigm shift in computation. We are entering a fascinating period in the development of quantum computers. Quantum systems are scaling up in both size and reliability and are getting close to showing a real advantage over classical computers

2019, Google's quantum computer did a calculation in less than four minutes that would take the world's most powerful computer 10,000 years to do and is About 158 Million Times Faster Than the World's Fastest Supercomputer. Google's Quantum Computer Is About 158 Million Times Faster Than the World's Fastest Supercomputer. New computing in scale, speed and capability are continually achieving new milestones

The potential benefits and applications of quantum computing for society have many use cases. A good summary is below."

- Quantum Computers will deliver **enormous speed** for specific problems. Researchers are working to build algorithms to find out and solve the problems suitable for quantum speed-ups.
- The speed of quantum computers will improve many of our technologies that need **immense computation power** like Machine Learning, 5G (and even faster internet speeds), bullet trains (and many other transport methods), and many more.

- Quantum computing is important in the current age of **Big Data**, as we need efficient computers to process the huge amount of data we are producing daily.
- Despite being computational, Quantum computers can **reduce power consumption** from 100 to 1000 times they use Quantum tunnelling.

Governments, academia, and many technology leaders in industry, are all now investing with heightened intensity in research & development and are contributing to the quest to develop functional quantum computing. We certainly are on the pathway to the new era, quantum computing is still in a nascent stage, but we may arrive there sooner than we imagined.



Ms. Shilpa Singhal
Assistant Professor
(IT Department)

"Quantum Computing"

As soon as we hear the word "Quantum Computing", what is the first thing that strikes is : It is a combination of two words Quantum and Computing. Let us begin with the word Quantum, it denotes the word "amount" in Latin language. In 20th century, quantum can be understood as any physical property's smallest discrete unit, where the physical property can be energy or matter. The word Computing means the involvement of computers to achieve goal oriented task

- **Evolution of Quantum Computing**

Weather forecast, internet browsing, mathematical calculations etc. are done the same way as done manually, which puts a limitation on the fastest computers. The microprocessors are not responsible for this, it is only that computers are inefficient to solve complex problems. Classical computers perform operations serially, i.e. dividing a single task into multiple sub-tasks and then carrying out a single operation one at a time in serial manner. To make computational task efficient, efforts were made to perform two different operations on different computers parallelly, but the progress was not steady. The reason being that micro-processor's logic operation is serial.

This limitation of serial computers can be overcome by parallel computers, that can perform multiple-operations at a single instant of time, exploring all possible opportunities and among them selecting the most efficient one. Such computers performing parallel computations are known as quantum computers, that have a unique feature of quantum parallelism.

- **Difference between Classical Computing and Quantum Computing**

Below we list down the differences between classical computing and quantum computing presented by Fig.1

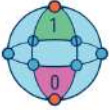
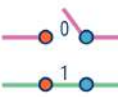
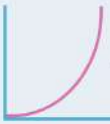

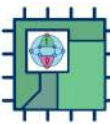
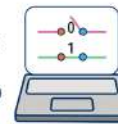
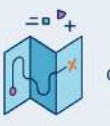

Quantum Computing	Vs.	Classical Computing
 <p>Calculates with qubits, which can represent 0 and 1 at the same time</p>		 <p>Calculates with transistors, which can represent either 0 or 1</p>
 <p>Power increases exponentially in proportion to the number of qubits</p>		 <p>Power increases in a 1:1 relationship with the number of transistors</p>
 <p>Quantum computers have high error rates and need to be kept ultracold</p>		 <p>Classical computers have low error rates and can operate at room temp</p>
 <p>Well suited for tasks like optimization problems, data analysis, and simulations</p>		 <p>Most everyday processing is best handled by classical computers</p>
CBINSIGHTS		

Fig. 1. Difference between Classical computing and Quantum Computing

- **Basic concepts of Quantum Computing**

Qubits - The unit of information used in quantum computing is not binary, but quantumbits or qubits that follow the law of quantum motions. Unlike binary digits that can exist only as 1 or 0, a qubit can take 0 or 1 both values simultaneously or separately and the probability of each state is represented by numerical coefficient. The qubit can be geometrically represented as points on unit sphere using bloch sphere.

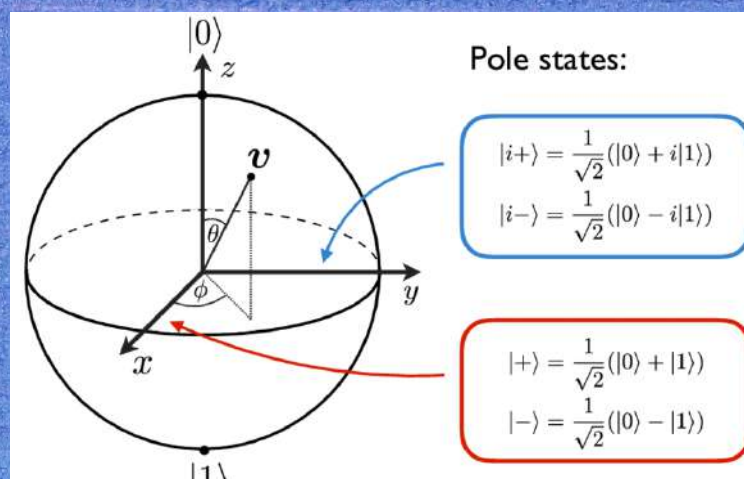


Fig. 2. Bloch sphere representation of Qubit

Superposition — Qubit is governed by the laws of quantum mechanics, since it states that the observable states are probabilistic. Superposition is a phenomenon where a linear combination of distinct quantum states represents a valid quantum state. The phenomenon of superposition allows Qubit to be in both $|0\rangle$ and $|1\rangle$ states at the same time.

Entanglement — This is a phenomenon in which the description of two or more objects' quantum states are given with reference to each other, despite the fact that the spatial locations of individual objects are different.

• Research in Quantum Computing

One of the misconceptions about quantum computers is, it is used in the factorization of large numbers, or code breaking of complex numbers. However, more advancement has been made on above of it. A concept known as quantum annealing has been developed. This concept can be used to solve a variety of different complex problems related to healthcare and machine learning. During annealing process, a quantum processor can exist in more than one state, needed states are employed for computation, and re-adjustments are made.

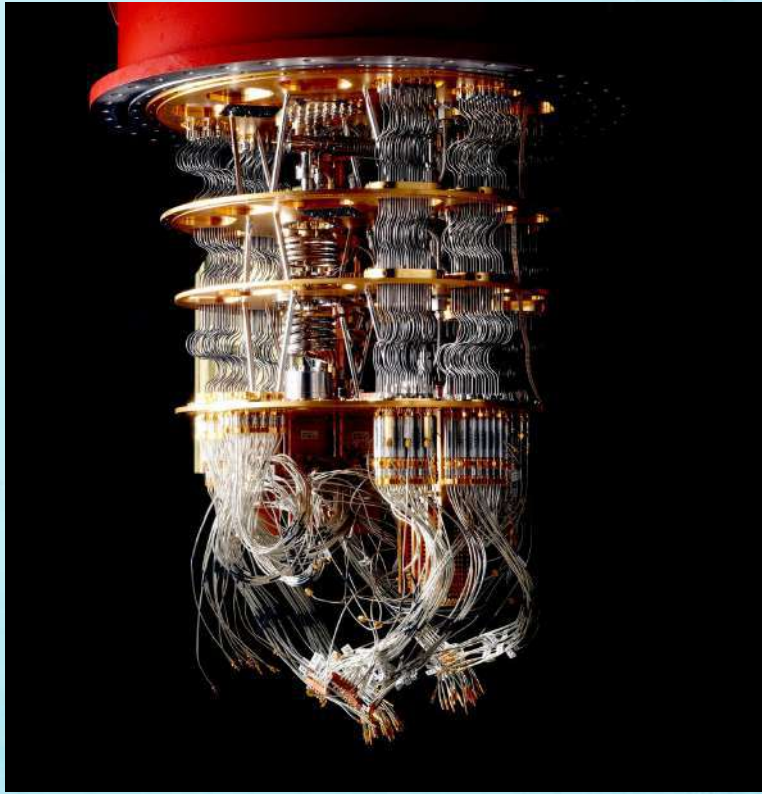
- **Challenges in Quantum Computing**

There are significant skill shortages, where people having knowledge of both physics and computer are available. Shortage of funds is another concern, since many universities cannot afford to set up infrastructure required for quantum computers. Construction of hardware is another major hurdle



Dr. Amreen Ahmad
Assistant Professor
IT Department

" INDIA'S QUEST TOWARDS QUANTUM SUPERMACY "



India's strive towards quantum computing must carve out a better place for itself when it comes to futuristic technologies.

In recent news, India has announced its partnership with Finland to work towards quantum computing. The digital partnership between the Indian Institute Of Science Education and Research (IISER) at Pune and Finland Aalto University has created a high probability of getting its first quantum computers.

Finland – India partnership for future talking about the partnership, Neeta Bhushan, the joint secretary (Central Europe), External Affairs Ministry, stated that the idea of jointly developing quantum computers with the use of artificial intelligence and 5G technology is an important area for collaboration for both countries.

According to the report, the quantum computing market is currently reaching 2,545 millions by 2029. Alongside, the government of India's allocation of 8,000 crores towards quantum computing technologies and application.

The department of science and technology (DST) has also recently launched the Quantum-Enabled Science and technology (QUEST) program to lay the ground work for building quantum computers in India.

Similar to the Indian government allocation fund to prepare the groundwork of quantum computing, the Finland government has also allocated around 20 million on a partnership when a finish startup IQM was chosen to work with the VTT technical research foundation of Finland to build a 50 qubit quantum computers by 2024.

Quantum encryption is one of the basic application derive from this collaboration, which will ensure a secure line of communication especially for the Armed Forces and prestigious organization such as ISRO, DRDO and other intelligence agencies, to further strengthen network centric warfare.

Data transfer using traditional computers has always been susceptible to hacking ; however, Photon – based packets are linked to each other and alert both the sender and the receiver about any possible intrusion by a third party, thereby securing networks. It also have great contribution in the field of Aviation, Data analysis, Forecasting, climate and pharmaceutical research.



Aditya Rupak
2nd year,IT

"Quantum computing -The future of Computing"

"Computer Science is no more about computers than astronomy is about telescopes."

— Edsger W. Dijkstra

Computer science is one of the pillars which is holding the base of humankind now and a mind boggling fact is that it came less than 100 years ago unlike fire and wheel which came 2 million years ago . It means we still have many things to find , make and modify in this field which make it a vast field on its own . One of its futuristic aspects is Quantum Computing.

- **But what is Quantum Computing ?**

In simple words Quantum Computing is based on a phenomenon called Quantum mechanics which humans don't understand completely ,and is capable of doing wonders to the extent we can't imagine . Quantum computing uses quantum mechanics to deliver a massive jump in computation to solve certain problems.

- **Why do we need Quantum Computers ?**

To solve some big difficult problems Supercomputers are not able to solve. Until now, we've relied on supercomputers to solve most problems. These are very large classical computers, having thousands of cores of CPU and GPU. However Supercomputers also have some limitations in their computing .This is why we need quantum computers.

- **Why are they faster ?**

In normal computers we have only 0 and 1 in which we store the data but in Quantum computers we have an extra bit called Qubits. Quantum computers can create vast multidimensional spaces in which to represent these very large problems. Classical supercomputers cannot do this.

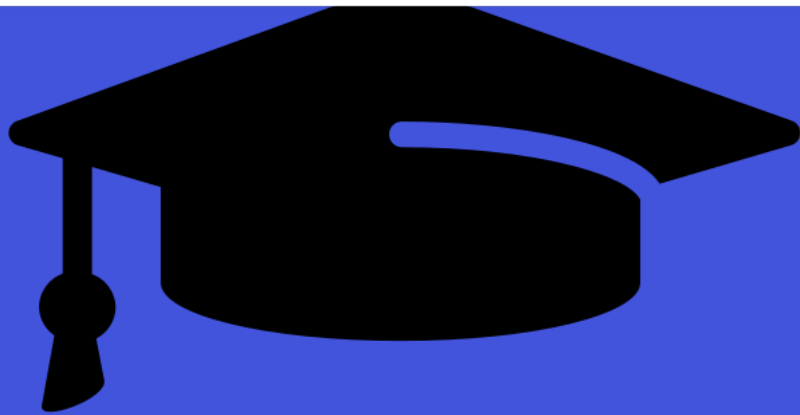
Algorithms that employ quantum wave interference are then used to find solutions in this space, and translate them back into forms we can use and understand.

- **How quantum computers work?**

You don't have to know how quantum computers work to use them. What we can know is that bits are used in a classical computer, at the heart of the quantum computer are quantum bits or qubits which can store information in quantum form. A qubit (or quantum bit) is the quantum mechanical analogue of a classical bit. In classical computing the information is encoded in bits, where each bit can have the value zero or one. In quantum computing the information is encoded in qubits.



Shivang bhardwaj
IT2 Second Year



ALUMINI SPEAKS





Shiva Panwar IT (2013-2017) Batch, Senior Consultant, Pinnaxis IT solutions and Consulting, Noida

It was back in 2013 lane, when just a school passed out girl entered from these gates and after four eventful years, a lady walks off talking so many memories, lessons and achievements.

I still remember a line from one of the Orientation speeches that an individual's intellectual and social stimulation begins from THE COLLEGE. Didn't realise it then but now after these many years I think it is cent percent true.

College life is an important phase in a student's academic journey after the numerous formative years of schooling. This life is not about being perfect but moulding yourself into the best version by doing mistakes, trying things out of your comfort zone. It is not only about studies or grades, it's about an all-round development.

When I look back at those years, what a wide spectrum I got, from technical learning to enjoying and organizing cultural/tech Fests and the icing on the top, 2 jobs via campus recruitment. I think this is the best guidance a fresher can get, my professors helped me develop my competency, taught me how to be autonomous, helped me manage my emotions and last but not the least, helped me define my identity and this is what I call a 360 degree development. I am blessed to be guided by the most committed, patient, knowledgeable and caring teachers from the IT department.



Nandini Singhal
IT, 2019 Batch
Software Engineer
(Developer) , Tata
Consultancy
Services

LOOKING BACK AT THE 4 YEARS THAT I SPENT IN ENGINEERING, THERE ARE SO MANY MEMORIES THAT COME AS A FLASHBACK. I HAD THE PLAESURE OF COMPLETING MY GRADUATION FROM IMSEC, GHAZIABAD UNDER THE GUIDANCE OF HIGHKY EFFICIENT PROFESSORS AND MANAGEMENT. FROM THE FIRST DAY ITSELF THE INSTITUTE HAS SURPRISED ME WITH SUCH A PHENOEMNAL STEP BY STEP LEARNING PROCESS. ENGINEERING COUSRE IS NOT JUST A PROCESS OF EARNING A BACHELOR'S DEGREE. IT IS ALSO A PERIOD WHICH DEFINES YOUR LIFE. YOU ENTER A COLLEGE AS A CONFUSED TEENAGER AND A RIGHT INSTITUTE SERVES THE VERY PURPOSE OF MOULDING YOU UP IN EACH AND RESPECT AND MY COLLEGE IMSEC DOES A VERY GOOD JOB IN DOING SO.



Shubhangi Sharma
Batch (2016-2020)

***The key to success is to focus on goals, not obstacles.
An arrow can only shot by pulling it backwards.
when life is dragging you back with difficulties, it
may not only mean that it is preparing to launch
you into something great. Just because something
good is not happening for you right now does not
mean it will happen. no matter where you are in
your life right now, yo have the opportunity to make
a U turn. if you are not willing to risk the usual, you
will habe to settle for the ordinary.
there is nothing worse than wishing you could go
back change something, but it's too late.
time will pass whether you chase your dreams or
not. so chase your dreams.***

let's get it done. now!!

The image features a blurred background of a library with rows of books on shelves. Overlaid on this background is a blue, stylized graphic element that resembles a speech bubble or a drop. Inside this blue shape, the words "Lit Drops" are written in a bold, black, sans-serif font. The text is slightly offset to the right, with the word "Lit" being smaller and positioned to the left of "Drops".

Lit Drops

सावन "The Feel Of Love"

समय कितनी तेजी से गुज़र जाता है और गुजरते - गुजरते अपने साथ कई चीजों को भी बदलता चला जाता है । हाथ में कॉफी का मग लिए बाहर बालकनी

में सुहाने मौसम का लुत्फ उठाते हुए कुछ ऐसा ही राहुल सोच रहा था कि तभी बारिश शुरू हो जाती है । जैसे-जैसे बारिश की बूंदें राहुल के चेहरे पर

पड़ती हैं वैसे वैसे उसकी दिल की धड़कन बढ़ती चली जाती है । बारिश की हर बूंद को महसूस करते हुए राहुल आहिस्ता - आहिस्ता अपना पूरा शरीर खुले आसमान को सौंप देता है , जैसे मनो वो कह रहा हो कि आज मैं जी भर के भीगना चाहता हूँ ।

यकीन कर पाना मुश्किल है कि ये वही राहुल है जिसे आज से 3-4 साल पहले तक बारिश के नाम से सख्त नफ़रत थी और आज वो खुद को इस तरह बादलों को सौंपे बैठा है । यह किसी चमत्कार से तो कम मालूम नहीं पड़ रहा । तभी मेघना , राहुल को पीछे से अपनी बांहों में समा लेती है ।

मेघना ही तो थी वो जिसने राहुल को बारिश के असली



-- वंश त्यागी

(2nd year IT-2)

एहसास से परिचित कराया था । मेघना ही थी वो जिसने बंजर जैसी पड़ी राहुल की जिंदगी को एक महकते हुए बगीचे में बदला था । एक हल्की मुस्कान के साथ मेघना के हाथों को थामते हुए राहुल बुदबुदाया "आखिर तुम आ ही गई" । आंखों में थोड़ी शर्मा और लफ्जों में थोड़ी झिझक लिए मेघना बोली "क्यों ! मेरा आना तुम्हें अच्छा नहीं लगा ?" इतना कहते ही वो रूठ गई । राहुल चिढ़ाते हुए बोला "मैंने ऐसा तो नहीं कहा" । यहां तुम्हारे सिवाय मेरा है ही कौन है ? तुम ही तो हो जिससे मैं अपनी सारी बातें साझा करता हूं , अपना हर सुख-दुख तुम्हारे साथ बांटता हूं , यूँ कहो कि तुम्हारे ना होने से मैं कुछ भी नहीं । तो आखिर तुम्हारा ना होना मुझे कैसे अच्छा लग सकता है ? राहुल का शरारती स्वभाव अचानक भावुकता में बदल गया । राहुल का वो मासूम चेहरा देख , मेघना अपना अश्रु प्रवाह रोक ना सकी और आगे बढ़कर राहुल को गले से लगा लिया । यह कोई पहली बार नहीं था जब राहुल और मेघना इस तरह भावुक होकर मीठी यादों में गोते लगा रहे थे और यह होना लाज़मी भी था क्योंकि यह दोनों रोज़ मिलते ही कहां थे ! साल में सिर्फ सावन के मौसम में वो भी तब , जब बरसात की झड़ी लगी हो । अब वो पहले वाली बात नहीं है जब दोनों रोजाना घंटों बातें करते थे , हंसी - मजाक करते थे , बाहर घूमने जाया करते थे , खुद से ज़्यादा एक दूसरे की फ़िक्र करते थे ।

लेकिन राहुल अब भी चाहता है कि वो मेघना के साथ ज़्यादा से ज़्यादा समय बिताए । मगर अफसोस ! ऊपर वाला राहुल से यह हक 2 साल पहले ही छिन चुका है। हां ! 2 साल पहले मेघना को ऊपर वाले ने राहुल से छीन लिया । मेघना के जाने के बाद राहुल अंदर से बिल्कुल टूट चुका था । घंटो तक बंद , अंधेरे कमरे में खुद को कैद रखना मानो उसका एक नया शौक बन गया था । अगर मेघना के जाने के बाद राहुल के पास कुछ था , तो वो थी उसकी यादें ,

उन्ही यादों के साथ राहुल ने अपनी नई जिंदगी शुरू की। वो यादें कब राहुल के लिए वास्तविकता का रूप धारण करती चली गई राहुल को खुद इस बात का पता नहीं चला। वो यादें इतनी वास्तविकता से भर चुकी थी कि राहुल को खुद के इर्द - गिर्द मेघना का एहसास होने लगा।

सावन और बसंत यह ऐसे 2 महीने हैं जिनमें कोई भी व्यक्ति खुद को प्रेम सागर में गोते लगाने से नहीं रोक पाता। अकेलापन और तनहाई जब किसी को घेर लेती है तो उसके पास प्रेम रूपी सागर में समाधि ले लेने के सिवा कोई और चारा नहीं रह जाता और उसी समाधि में इस वक्त राहुल और मेघना दुनिया के सभी दुखों को भूलकर प्रेम की अनुभूति कर रहे थे।

उनका आलिंगन यह साफ दर्शा रहा था कि ना जाने आज के बाद उनकी मुलाकात फिर कब होगी इस समय को वह पूर्ण रूप से अपनी अंतरात्मा तक जी लेना चाहते थे और शायद यही कारण था कि राहुल और मेघना दोनों दो जिस्म और एक जान बनकर रह गए थे।

-- वंश त्यागी

प्रबोध

रोया न को न कर देख हाथ की लकीर
नहीं बाँधी है उसने हाथ में जंजीर तनिक
प्रयास करके देख तो प्रिये खुद बदल
जाएगी तेरी तकदीर ।



-- अदिती सिंह

(2nd year IT-1)

चित करदे किस्मत को अपनी उठा कलम
लिख दे तकदीर अपनी उसमें हस्तक्षेप
करने की सोचेगा कर मजबूत कर दे
जीवन की नींव अपनी।

कोई बदलनी होगी जीवन की रीत
आसानी से न मिलती जीत वसुधा की
मार्ग बना देगी सुधरने लगेगा तेरे जीवन
का संगीत ।

Ode: Intimations of Immortality'



Ishita Roy

3rd yr. IT

There was a time when
meadow, grove, and stream,
The earth, and every
common sight,
To me did seem
Apparelled in celestial light,
The glory and the freshness
of a dream.

It is not now as it
hath been of
yore;—

Turn wheresoe'er I may,
By night or day.
The things which I have seen I
now can see no more ...

NEWS WORTHY



CURRENT AFFAIRS

Opposition parties in Parliament have shown worst possible behaviour: Piyush Goyal

Opposition parties in Parliament have probably shown the “worst possible” behaviour they could and have left nothing to the imagination in destroying the foundation of Indian democracy, Union Minister Piyush Goyal has said. The Prime Minister introduced ministers in both the Houses, a tradition that’s been going on for 70-odd years, but the opposition for the “first time” did not even allow that, he said.



'Sorry state of affairs': CJI N V Ramana on lack of debate in Parliament

Chief Justice of India N V Ramana Sunday said it is a "sorry state of affairs" as the absence of quality debate leaves many aspects of laws unclear and increases the burden on courts. He said that an elaborate discussion during the law-making process reduces litigation as when courts interpret them, "we all knew the intent of the legislature

JEE (Advanced) 2021 examination for admission into IITs to be held on October 3, 2021

The IIT entrance test, Joint Entrance Examination (JEE)-Advanced, will be conducted on October 3, 2021, Union education minister Dharmendra Pradhan announced on Monday. The exam, earlier scheduled on July 3, was postponed in view of the Covid-19 situation. "JEE (Advanced) 2021 examination for admission in #IITs will be held on the 3rd October, 2021. The examination will be conducted adhering to all Covid-protocols," Pradhan tweeted.





National Gallery of Australia to hand over 15 artifacts to India: G Kishan Reddy

Culture Minister G Kishan Reddy on Friday said that the National Gallery of Australia will be returning 15 artifacts to India through the concerted efforts of the Ministry of Culture and Ministry of External Affairs under the leadership of Prime Minister Narendra Modi.

More than 100,000 children in Ethiopia's Tigray at risk of death from malnutrition: UNICEF

More than 100,000 children in Tigray, Ethiopia, could suffer from life-threatening severe acute malnutrition in the next 12 months, a tenfold jump over average annual levels, UN Children's Fund (UNICEF) said on Friday.



Pegasus row: Centre denies snooping charge, to set up probe committee

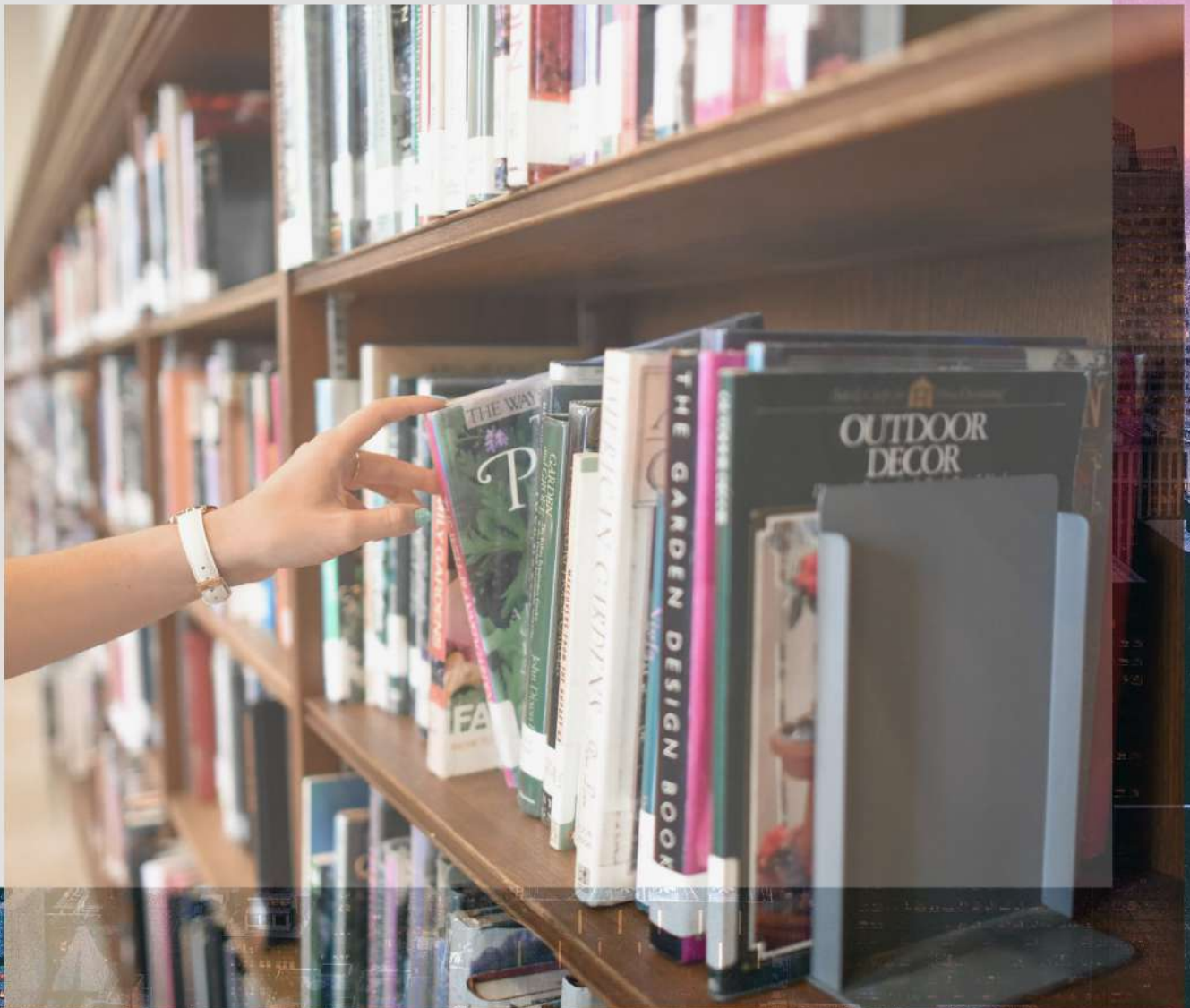
The Centre has denied all allegations of snooping and illegal surveillance against the government made by petitioners seeking in connection with the Pegasus row. In a two-page affidavit filed in the Supreme Court, the Centre also said it will set up a committee of experts to probe the Pegasus scandal and "dispel any wrong narrative spread by certain vested interests."

Taliban wrests control of Afghanistan, evacuees recount ordeal

With Ashraf Ghani stepping down as president of Afghanistan and the US military's exit, the Taliban are now in control of the war-torn country. Kabul's streets were jammed with vehicles and chaotic scenes unfolded at the airport as panicked people raced to leave the city. An evacuee who landed at Delhi airport on Sunday bemoaned that the world had

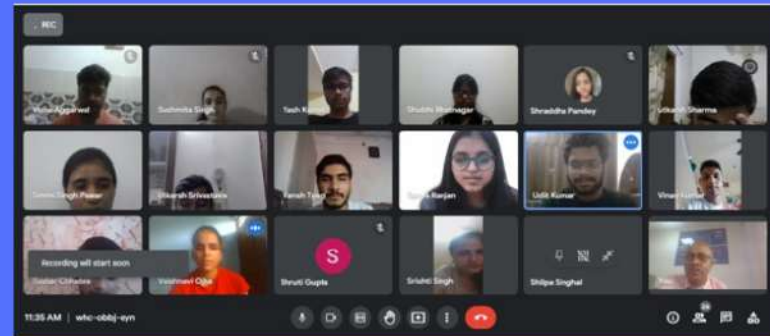


Department News



DEPARTMENT NEWS

Students along with faculty members of IT Department took SWACHHA BHARAT PLEDGE on 26-07-2021. It was the initiative of IMS Engineering College to celebrate "Swachhata Pakhwara 2021" in Higher Educational Institutions under MHE, GOI. Some of the glimpses during the pledge:



ESSAY WRITING COMPETITION

InfoCorp Society of IT Department organized final round of Essay Contest for 1st & 2nd year of B.Tech students. The theme of the essay were:

1. Global Warming in 21st Century and Contribution of India towards its mitigation.

2. Use of Advanced technologies in Education: A Boon or Bane.

The contest was organized in virtual mode. The ten contestants, who entered into final round, presented their essays before the panel of internal judges (Dr Suman Gupta (Asstt Professor, AS&H), Dr Indu Bhatt (Asstt Professor, Biotechnology), Ms Chandra Pushpanjali Patel (Asstt Professor, CSE).



The winners of the contest were:

1st Position: Nishthha Paliwal, 1st Year, 2020-21, Biotechnology

2nd Position: Vansh Tyagi, 2nd Year, 2020-21, Information Technology

3rd Position: Gudiya Sakshi, 2nd Year, 2020-21, Information Technology

FACULTY PARTICIPATION

1. Dr Ajay Kumar Sahu, Asstt Professor, Participated in the GUJCOST-sponsored International Short Term Training Programme on "Blockchain Technology, Research Avenues, and its Applications " organized by the Department of Computer Science & Engineering, Institute of Technology, Nirma University, Ahmedabad, India, during 12th - 17th July 2021.
2. Mr. Gaurav Vats, Assistant Professor, participated in ,Five day online FDP on "ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING "organized by IcfaiTech, ICFAI University, Jaipur in collaboration with IEEE Rajasthan Sub -section during June 28 July 02, 2021.
3. Ms Shilpa Singhal, Asstt Professor, participated in Online FDP on "Emerging Trends in OFC Technology" from National Institute of Technical Teachers Training and Research (NITTTR) under AICTE-ATAL (AICTE Training And Learning) program, from from 2nd August to 6th August 2021.
4. Dr Suveg Moudgil, Asstt Professor, participated in two Days FDP on "AI & ML Toolkit in Research Application" organised by Department of Electronics and Communication Engineering, Chandigarh Engineering College in association with Eureka ElectroSoft Solutions Pvt. Ltd. Punjab, IETE Chandigarh and Institutions Innovation Council of Chandigarh Engineering College, Landran on from 23rd and 24th July, 2021.
5. Dr Suveg Moudgil, Asstt Professor, participated in one week workshop on REACT JS organized by Department of Computer Science & Engineering in association with National Youth Council of India and Brainovision Solutions India Pvt. Ltd. from 5th July - 10th July, 2021.
6. Mr. Updesh Jaiswal, Asstt Professor, participated in one-week online FDP on "Deep Learning for Natural Language Processing (DL-NLP-2021) organized by the Department of CSE & IT, Jaypee Institute of Information Technology, Noida from 28th June to 03th July, 2021.
7. Mr. Updesh Jaiswal, Asstt Professor, participated in one-week online FDP on topic "Innovations and Trends in Software Engineering organized by the Department of CSE & IT, Jaypee Institute of Information Technology, Noida, from 7th June to 12th June, 2021.
8. Mr Neeraj K. Sirohi, Asstt Professor, participated in Online FDP on "Machine Learning and Computer Vision" from 5 July 2021 to 9th July 2021" from Vignans Foundation for Science Technology and Research University under AICTE-ATAL (AICTE Training And Learning) program.
9. Mr. Manoj Kumar, Asstt. Professor, participated in one-week online FDP on "Innovations and Trends in Software Engineering organized by the Department of CSE & IT, Jaypee Institute of Information Technology, Noida, from 7th June to 12th June, 2021
10. Dr. Upasna Pandey, Associate Professor participated in, International e-workshop entitled Role of IT in Healthcare: Technologies and Applications (RIHTA) organized by Department of Computer Engineering & Information Technology, Sankalchand Patel College of Engineering (SPCE) Affiliated to Sankalchand Patel University, Visnagar on 13th August 2021 to 14th August 2021.
11. Dr. Upasna Pandey, Associate Professor participated in, AICTE Training And Learning (ATAL) Academy Online Elementary FDP on "Machine Learning Frontiers in Healthcare" from 2021-7-26 to 2021-7-30 at National Institute of Technology, Delhi
12. Dr S N Rajan, Professor & Head, participated in online FDP on "Process Oriented Training Program on Child Centric Disaster Risk Reduction" Organized by FICCI & National Institute of Disaster Management (Ministry of Home Affairs), from 21-23 July 2021.

Placement Update (B.Tech IT,Batch 2021)

Roll Number	Full Name	Placed In
1714313004	Abhishek Verma	Accenture
1714313005	Aditya Kumar RajKamal	TCS
1714313006	Akansha Singh	Mirketa Inc.,HCL TECH.
1714313009	Akshay Srivastava	Algoworks,Planetcast
1714313010	Akshit chaudhary	VVDN
1714313011	AKSHIT KUMAR	Square Yards
1714313012	Aman Srivastava	Vinove,Accenture
1714313013	Anurag Tiwari	Espire Infolabs
1714313014	Arpit Sharma	Cloud Analogy
1714313015	Arushi Sanjay	TCS
1714313016	Aryan Mishra	Vinove
1714313017	Ashish Kumar Kushavaha	Appventurez Mobitech
1714313018	Ashutosh Mishra	TCS
1714313020	Ayush shukla	ATS India
1714313021	Ayush Singh	Centilytics & Mobilizeon & Infosys & TCS
1714313023	Deepanshu	Cloud Analogy & TCS, QA Infotech
1714313025	Dheeraj Mishra	Knoldus

Roll Number	Full Name	Placed In
1714313026	DhruvJohari	Square Yards
1714313027	Diksha Singh	TCS
1714313030	Harshit Sharma	Cloud Analogy & NTT DATA
1714313033	Jatin Arora	Centilytics & NTT DATA
1714313034	Jatin Trivedi	TCS & Infosys
1714313035	Jeegisha Srivastava	All e Technologies.HCL Tech.,Accenture
1714313036	Kajal Khanna	PIMCORE & TCS
1714313037	Kashish sharma	Square Yards
1714313038	Shreya Singh	Square Yards
1714313039	Km. Preeti	Sendinblue,DoubtNut.
1714313043	Kumari Akansha Singh	Mirketa Inc.
1714313047	Mayank Agrawal	QA Infotech
1714313048	Mayank Goel	GingerWebs & Coforge Limited,WIPRO,Accenture
1714313049	Mohammad Yusuf	Square Yards
1714313050	Mohd. Aadil	Algoworks
1714313051	Mohit Yagnik	WIPRO,Hcl tech
1714313053	Nakul Mitra	Mobilizeon & Nagarro
1714313054	Naman gupta	Ksolves
1714313055	Nandkishore Mishra	TCS

Roll Number	Full Name	Placed In
1714313056	Navneet Vashisth	TCS
1714313058	Nirmit Srivastava	VVDN & TCS
1714313060	Nitin Saxena	Knoldus
1714313061	Palak Kapoor	Centilytics & IBM & TCS & JK Technosoft & Nagarro
1714313062	Pankaj Gautam	QA Infotech,Espire Infolabs,DoubtNut
1714313065	Prakhar singh	Planet Cast Media
1714313070	Praveen Bhatt	Acadecraft
1714313071	Prince Chauhan	Cloud Analogy & TCS,Mind tree,Tech Mahindra,Accenture
1714313072	Princy Garg	Acadecraft
1714313074	Rajvikram Saxena	Cloud Analogy & TCS
1714313075	Rakhi Singh	VVDN & GingerWebs
1714313077	Ritika Rajput	QA Infotech
1714313078	Sagar goel	10 times,Knoldus
1714313079	Saloni Singh	VVDN
1714313080	Sankalp Shukla	Accenture
1714313081	Sanskar Srivastava	Ibirds Software service
1714313083	Shivam Singh	Appinventive
1714313084	Shivam Singh	Square Yards
1714313086	Shraddha Katiyar	Coforge Limited,HCLTech ,Accenture

Roll Number	Full Name	Placed In
1714313088	Shristi Singh	DoubtNut.,QA INFOTECH
1714313089	Shubham Gupta	TCS,wipro
1714313090	Somya Mishra	TCS
1714313091	Surayansh Neekhra	Algoworks
1714313093	Umesh Yadav	TCS & Coforge Limited
1714313095	Vaibhav Singhal	Square Yards
1714313096	Varun garg	HCL Tech.,Accenture
1714313097	Varun Jaiswal	Pheuture Studio
1714313099	Yash Kumar	DoubtNut.,wipro,Star telelogic
1814313901	Adarsh Sharma	Just Dial,QA Infotech



Prince Chauhan
B.tech, IT, 4th yr
1714313071

College life indeed is one of the best experiences of one's life. Apart from enjoying life to the fullest, eating in cafeterias and roaming around. IMS Engineering College has given me a chance to sharpen my skills in my field of choice and gave me a good opportunity for my career that I was looking for. Apart from theoretical knowledge, I also gained practical exposure through internships & pre-placement activities. It gives me a great opportunity to enhance my skills & knowledge before I step into corporate world. I would like to thank all the faculty members & CDC for their valuable support.

IMSEC helped me in cracking many placements in good companies like Tech Mahindra, Cloud Analogy, MindTree, Accenture and TCS (package ranging from 3.5 LPA to 7.6 LPA).

I really appreciate all the hard work by the college staff and it means a lot to me. Proud and grateful to be a part of IMS.

Thank you.



Palak Kapoor
B.tech, IT, 4th Year
1714313061

College life is one of the most memorable years of one's life. We go through a lot of changes when we enter college. IMS not only helped me to grow as an individual but also gave me more exposure and made me more confident.

At IMS I experienced the most memorable phase of my life with my friends which I will cherish the most. I would like to thank all the faculty members of the IT department who helped me throughout this journey learning new concepts and exploring new opportunities. Their knowledge and experience helped me to build the right skills and education for a better career. The CDC team is very supportive and provided us with many opportunities and helped us in preparing for best. It was the constant support and guidance of all the faculty members and CDC team that I grabbed offers from companies like IBM, TCS, Nagarro, Centilytics and JK Technosoft.

I will always be grateful to everyone who was there as my support system and helped me throughout.
Thank You.

UPCOMING EVENTS

Panel Discussion: Keys to Succeed in Hybrid World of the Future of Work

Link:

<https://www.gartner.com/en/webinars/4003660/panel-discussion-keys-to-succeed-in-hybrid-world-of-the-future-of-work>

Date:- 23 August 2021

Time:- 8:30 PM IST

Create a Responsible AI Strategy

Link:

<https://www.gartner.com/en/webinars/4003778/create-a-responsible-ai-strategy>

Date:- 26 August 2021

Time:- 8:30 PM IST

Track the Emerging Technologies in Security and Risk Management

Link:

<https://www.gartner.com/en/webinars/4003739/track-the-emerging-technologies-in-security-and-risk-management>

Date:- 27 August 2021

Time:- 07:30 PM IST



GEMS OF IMSEC

**DEPARTMENT OF INFORMATION
TECHNOLOGY**



IMS ENGINEERING COLLEGE

DEPARTMENT OF INFORMATION TECHNOLOGY

UNIVERSITY RANK HOLDERS

SI No	Name	Batch	University Rank	Photo
1.	Aakash Bhutaani	2009	1 st (Gold Medal)	
2.	Sheena Hora	2014	4 th	
3.	Divya Garg	2015	14 th	
4.	Shivangi Goswami	2017	5 th	
5.	Shivam Shukla	2020	9 th	



Brain Stormers

Questions

I. Who has created the Quantum Computing and in which Year ?

II. Instead of bits Quantum Computing use ? III. NISQ stands for ?

IV. When the two members of a Qubit pair exist in a single quantum state, it is known as ?

V. What is the first Graphical Browser ?

VI. IETF stands for ?

VII. Internet is a type of network ?

VIII. In , UNIX which system call create the new process

IX. Semaphore is ?

X. The interaction of qubit with their environment in ways that cause their quantum behavior to decay and ultimately disappear is known as ?

Answers

I. David Deutsch in 1997

II. Qubit (Quantum Bit)

III. Noisy Intermediate Scale
Quantum

IV. Entanglement

V. Mosaic

VI. Internet Engineering Task
Force

VII. WAN (Wide Area Network)

VIII. Fork

IX. Synchronization Tool

X. Decoherence

Thank You

Send Your articles at
itanium@imsec.ac.in

**IMS Engineering College
NAAC accredited with "A"
grade Approved by AICTE
New Delhi and affilated to Dr.
A.P.J Abdul Kalam Technical
University Lucknow**

