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BENGALURU

The Communique

*Presidency School of Computer Science & Engineering
&
Presidency School of Information Science*

Quantum Leap: The Future Starts Here



TABLE OF CONTENTS

1	FROM THE HELM
2	THE TEAM
3	LEARN FROM THE BEST
13	THE INSIGHT EXCHANGE
15	THE INDUSTRY PULSE
17	NPTEL STARS & RESEARCH FRONTIERS
22	DEPARTMENTAL NEWS AND UPDATES
27	QUANTUM BYTES, GLOSSARY & LAB
30	UNWIND ZONE
32	BOOK REVIEW
34	UPCOMING FDP, CONFERENCES & RESEARCH PROPOSALS
37	UPCOMING EVENTS
38	THE WRAP UP

LETTER FROM THE EDITOR



From Insights to Impact—Lead the Change

Technology is evolving at an unprecedented pace, redefining the way we learn, innovate, and shape the future. From artificial intelligence and quantum computing to sustainable technologies and digital transformation, the world is witnessing breakthroughs that are no longer distant possibilities but emerging realities. Every new discovery pushes the boundaries of human potential, inspiring us to think beyond limitations and embrace the opportunities of tomorrow.

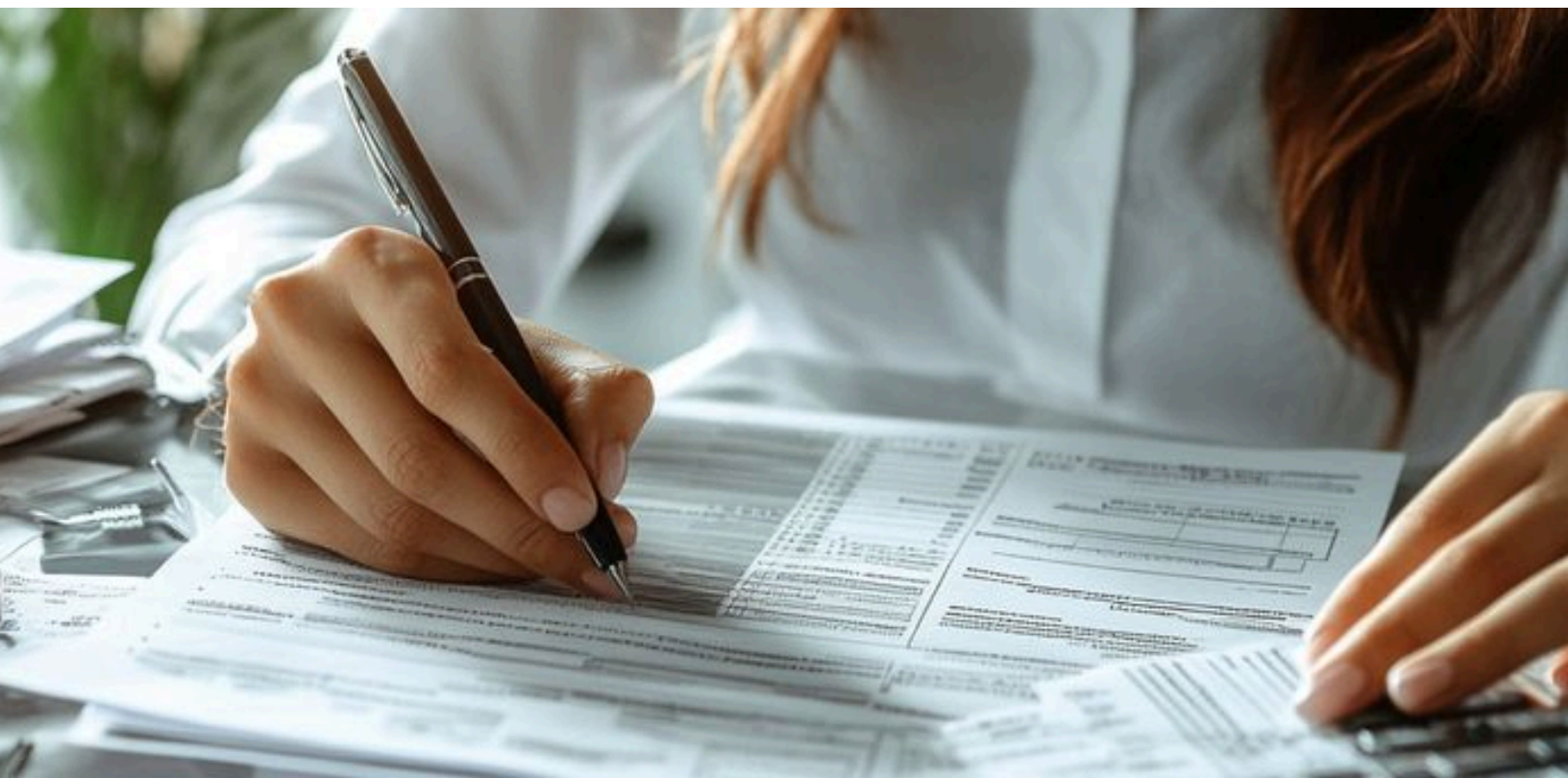
This edition of The Communique, themed “Quantum Leap – The Future Starts Here,” celebrates the spirit of bold innovation and transformative thinking.

The articles in this issue explore groundbreaking ideas, emerging technologies, scientific advancements, entrepreneurship, and creative solutions that are shaping the future. They reflect how curiosity, knowledge, and collaboration can drive meaningful progress across industries and communities.

Innovation flourishes when ideas are supported by purpose, responsibility, and a commitment to continuous learning. The future belongs to those who dare to imagine beyond the present and transform possibilities into reality.

Through this edition, we celebrate the vision, creativity, and determination of young innovators. Let this be a reminder that every bold idea has the potential to spark transformation, every breakthrough begins with curiosity, and every individual has the power to shape a future filled with endless possibilities.

The Editorial Board



FROM THE HELM

It is my privilege to present this edition of The Communique, themed “Quantum Leap: Future Starts Here.” This theme reflects the remarkable progress of quantum technologies and their potential to redefine the future of computing, communication, and scientific discovery.

Today, we stand at the threshold of a technological revolution where quantum computing is no longer a distant concept but an emerging reality. By harnessing the principles of quantum mechanics, quantum technologies promise unprecedented computational power, secure communication, and breakthroughs in fields such as healthcare, finance, cybersecurity, materials science, and artificial intelligence.

As the world accelerates toward the quantum era, governments, industries, and research institutions are investing heavily in quantum research and innovation. Alongside advancements in Artificial Intelligence, cloud computing, and next-generation communication systems, quantum technology is expected to become a cornerstone of the digital economy. India's National Quantum Mission further reflects the nation's commitment to building a globally competitive quantum ecosystem and empowering young researchers and innovators to lead this transformation.

At Presidency University, we are committed to fostering curiosity, critical thinking, and research-driven learning that encourages students to explore cutting-edge technologies. By promoting innovation, interdisciplinary collaboration, and scientific excellence, we aim to nurture future leaders who will contribute meaningfully to the rapidly evolving quantum landscape.

This edition of The Communique celebrates the exciting possibilities of the quantum age. The articles and insights featured in these pages explore the science, applications, and impact of quantum technologies, highlighting how they are poised to transform industries and society. As we take this quantum leap into the future, let us embrace innovation with vision, responsibility, and a shared commitment to building a smarter, more secure, and technologically advanced world.

Best Regards,

Prof. (Dr.) S. Sivaperumal

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THE COMMUNIQUE



THE TEAM

*The essence
and
The spirit
That breathe
Life into it all.*

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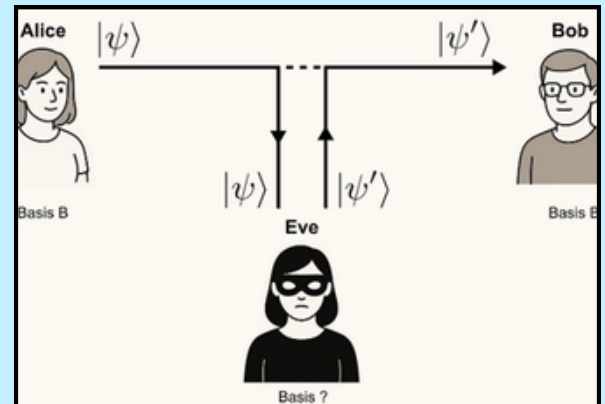


MR. KRISHNA MISHRA
SUB- EDITOR



Quantum Encryption: Securing Our Precious Information in Quantum Era

Today's world is digital, vast amount of sensitive information is being communicated every second in every corner of earth, across networks. Online banking transactions, personal information sharing, medical records, government communications, defence information, everywhere data security is a major concern. These data are protected by encryption, a technology that codes information, so that only authorized persons can access it. Traditional encryption techniques have successfully protected sensitive data for decades. But conventional technique like RSA is based on difficulties in solving challenging numerical problems, for classical computers it is practically impossible to solve these problems within reasonable time, but quantum computers can break such encryption. Hence emergence of quantum computers has brought significant threat to these conventional encryption techniques. Keeping in mind of extreme importance of data security quantum encryption techniques are introduced, a much-secured technology based on fundamentals of Quantum Mechanics.



How Quantum Information is shared

Quantum Key Distribution (QKD) is the secure communication technique which is used here. Information is shared by encoding information into the quantum states of individual particles (mostly photons), quantum information is stored in quantum bits (Qubits) which can stay in a superposition state of both 0 and 1 until measured.

Traditionally it is considered as Alice (the sender), Bob (the receiver), Eve (the potential eavesdropper) are involved in the process. Alice generates a random sequence of binary bits (0 and 1) and codes the bits with individual photons using different polarization states. Alice randomly chooses between rectilinear or diagonal polarization bases. These polarized photons are sent to Bob using a quantum communication channel like optical fibre. Bob is unaware of the basis Alice has chosen, he randomly selects basis for each incoming photon. If correct basis is chosen, he measures the correct bit value, for wrong basis measurement becomes random for laws of quantum mechanics.

After completing transmission, Alice and Bob communicate over a public classical channel and compare the bases they have used. The bits are kept if their bases match and discarded if they don't. Remaining bits form the secret key. According to quantum principles measuring a quantum state will alter it, so if any eavesdropper tries to intercept the information detectable disturbance will be created and Alice and Bob will be able to identify the unauthorized interception and can discard the compromised information. To further ensure security Alice and Bob compare a small portion of quantum key to estimate Quantum Bit Error Rate (QBER). If QBER is below a certain predefined range, it is considered that no significant eavesdropping happened.

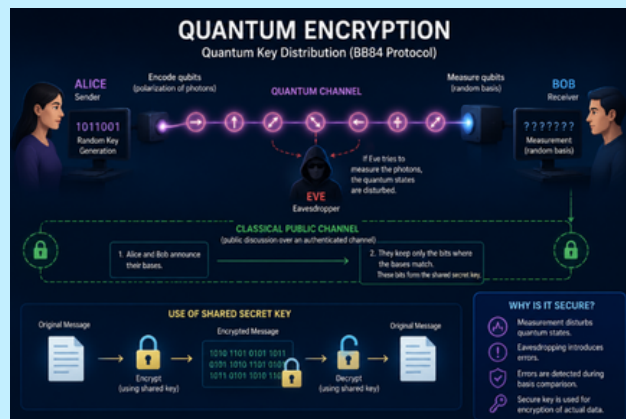
Quantum Encryption: Securing Our Precious Information in Quantum Era

Role of Quantum Physics

Quantum cryptography is based on remarkable principles of Quantum Physics. Heisenberg's Uncertainty Principle states that certain properties of a quantum particle cannot be measured simultaneously with perfect accuracy. If Eve tries to measure the quantum state of a photon without knowing the correct basis, she disturbs its original state, resulting in a high error rate during key comparison. This allows Alice and Bob to detect her presence.

The No Cloning Theorem states that it is impossible to create an exact copy of an unknown quantum state. This prevents an attacker from copying or measuring the state without affecting the original transmission.

According to Quantum Superposition, a quantum particle can exist in multiple possible states until it is measured. Any unauthorized observation forces it into a definite state, altering the transmitted data and making secret interception detectable.



Is It the Future?

The first and most widely used QKD protocol is BB84, while others include B92, E91, and CV-QKD. Several countries have already demonstrated long-distance quantum communication through fibre-optic networks and low-Earth-orbit satellites. Although challenges such as high implementation cost and limited communication distance remain, active research is addressing these limitations.

As the technology becomes more scalable and affordable, sectors such as banking, defence, government communication, cloud computing, and healthcare are expected to adopt quantum encryption for enhanced security. The era of quantum technology is approaching, and quantum encryption is set to become a cornerstone of future cybersecurity.



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The Encryption Crisis Already in Progress

In government data centres around the world, encrypted files are being collected not because they can be read today, but because they may be decrypted in the future. This strategy, known as "harvest now, decrypt later," assumes that powerful quantum computers will eventually break today's encryption. Medical records, diplomatic cables, and financial transactions are already being stored for that day.

Modern digital security depends on a mathematical asymmetry: multiplying two large prime numbers is easy, but factoring their product is practically impossible for classical computers. This principle underpins RSA and much of today's internet security. In 1994, Peter Shor showed that a sufficiently powerful quantum computer could factor these numbers exponentially faster, making RSA and Elliptic Curve Cryptography (ECC) vulnerable. Although today's quantum computers are still too small and error-prone, their progress makes preparation essential.

The Physics of Secrecy

Quantum cryptography takes a different approach by relying on the laws of physics rather than mathematical difficulty. Its main technology, Quantum Key Distribution (QKD), uses individual photons to exchange encryption keys.

The BB84 protocol, developed by Charles Bennett and Gilles Brassard, exploits two quantum principles: unknown quantum states cannot be copied, and measuring them changes them. Any eavesdropper therefore leaves detectable evidence, making undetected interception impossible.

From Research to Reality

QKD is already being deployed. China has built large-scale fiber-optic quantum networks and demonstrated satellite-based quantum communication using Micius. Companies such as ID Quantique and Toshiba have commercial QKD systems operating over existing telecom networks.

Distance remains a challenge because quantum signals weaken in optical fiber. Future quantum repeaters and quantum memory are expected to overcome these limits, while satellite-based systems provide an alternative for long-distance communication.

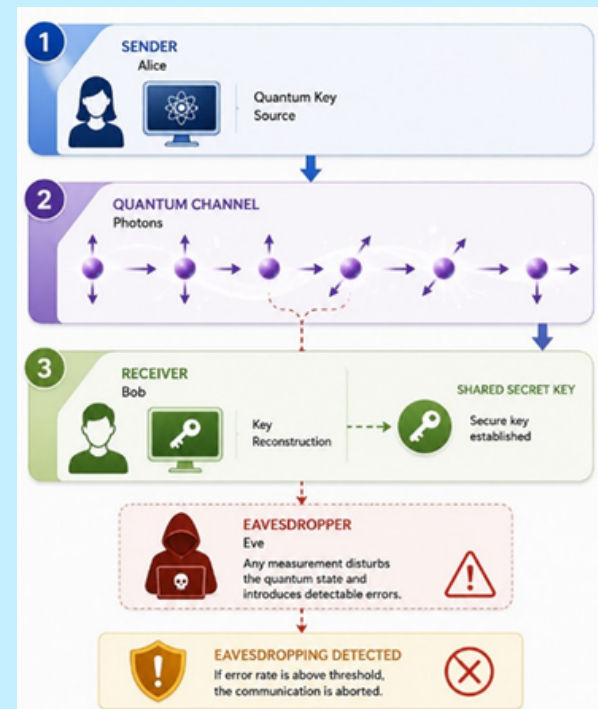
The Parallel Track

Alongside QKD, post-quantum cryptography (PQC) provides another solution. In 2024, NIST standardized algorithms such as CRYSTALS-Kyber and CRYSTALS-Dilithium, which resist quantum attacks while running on existing computers. PQC is easier to deploy, whereas QKD offers security guaranteed by physics. The future will likely use both.

The Real Challenge

The greatest risk is not technology but delayed adoption. Many hospitals, financial institutions, utilities, and governments still depend on encryption designed for a pre-quantum world. Migrating to quantum-safe systems will take years, while adversaries continue collecting encrypted data today.

Quantum computing represents a fundamental shift. It does not simply make current attacks faster—it threatens the assumptions underlying modern cryptography. Mathematics has protected the digital world for decades, but its limits are approaching. Physics offers a new foundation for secure communication, and the decisions made today will determine how prepared we are for the quantum era.



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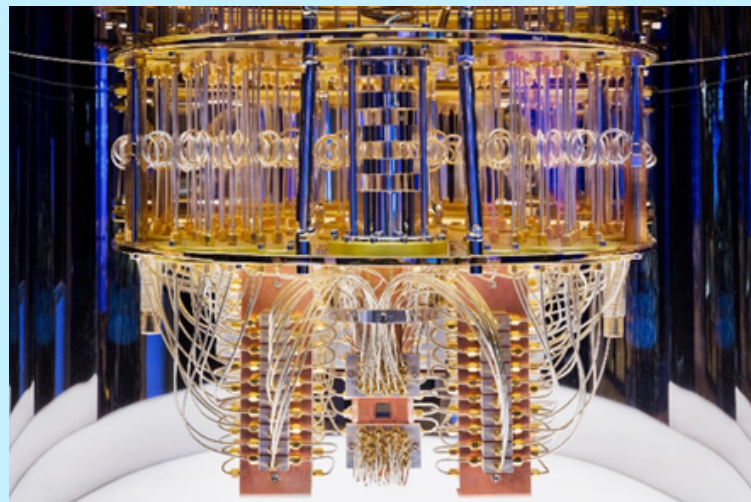
Mother Nature is Not Digital; Mother Nature is Quantum

Classical computers use binary bits (0 and 1), Boolean algebra, and transistors to process information. They have certain limitations in solving problems such as large-number factorization, optimization, and complex parallel processing. A transistor with current flowing through it represents bit 1, while the absence of current represents bit 0.

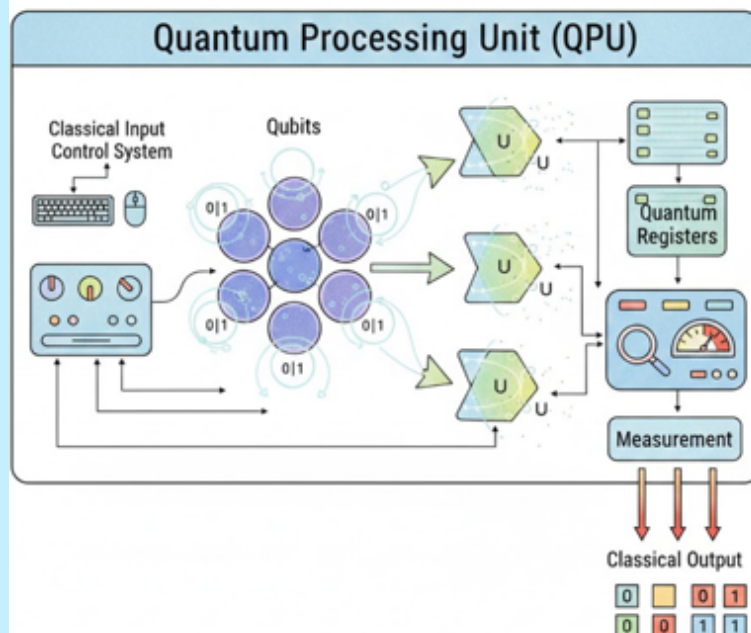
Photosynthesis cannot be fully explained using classical physics because it occurs at the atomic level, making a quantum approach necessary. This suggests that quantum computation follows principles already used by nature. Unlike classical computers, quantum computers use qubits (quantum bits) instead of transistors. Qubits can be physically realized using the polarization of photons, the spin states of electrons and protons, or the energy states of superconducting circuits, enabling faster processing and efficient data representation.

Quantum technology is based on the physics of atoms and subatomic particles and exploits unique quantum phenomena such as superposition, entanglement, and quantum interference.

Quantum technology is a broad field that includes quantum computing, quantum communication, quantum sensing, and quantum cryptography. Quantum computing is expected to accelerate scientific discoveries in areas such as materials science, drug design, energy systems, optimization, and complex simulations beyond the capabilities of classical computers. Quantum sensing is already used in MRI machines, while future quantum fibre-optic networks are expected to enable highly secure quantum communication. Quantum cryptography secures information using the principles of quantum mechanics.



THE QUANTUM PROCESSING UNIT



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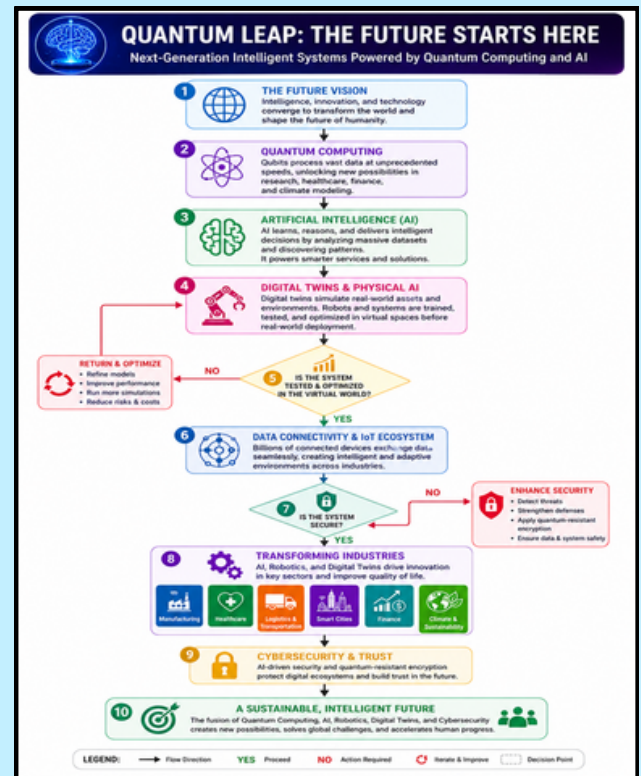
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Quantum Leap: The Future Starts Here

The future is no longer a distant dream, it is happening right now before our eyes. A digital brain glowing from an advanced computing system is an illustration of a new era where intelligence, creativity and technology converge to transform the world. This transformation is driven by breakthroughs involving Quantum Computing, Artificial Intelligence (AI), Robotics, Digital Twins, and Cybersecurity that together are shaping the future of humanity.

Conventional computers have been pushing progress forward for decades with binary bits. The bits are either 0 or 1. But as the world's problems get more complex, traditional computing is reaching its limits. The revolutionary alternative is Quantum Computing. Quantum Computing uses qubits that can be in multiple states at the same time. This ability allows quantum systems to handle massive amounts of information at speeds never seen before, creating new possibilities in scientific research, healthcare, finance and climate modelling.

This revolution is built on Artificial Intelligence. The digital brain is a symbol of AI's growing capability to learn, reason, and make intelligent decisions. AI can examine massive datasets to find patterns and generate insights that were previously unimaginable. AI is now a core component of everyday life, from personalised healthcare and self-driving cars to smart assistants and smart cities.



A big step forward in this direction is the convergence of Digital Twins and Physical AI. A Digital Twin is a digital replica of a physical object, factory, robot or even a whole city. Digital twins allow us to train, test, and optimise robots and intelligent systems in virtual worlds before they are deployed in the real world', said Jensen Huang, CEO of NVIDIA. "Organizations can reduce development time, lower costs and improve efficiency by modelling millions of scenarios. This approach accelerates innovation in manufacturing, healthcare, logistics and smart infrastructure, while enabling robots to learn safely and effectively.

The web of connections around the brain is the data flow of the modern digital ecosystems. In the future, billions of IoT-connected devices will constantly exchange information creating intelligent environments adapting to human needs. Industries will be transformed and quality of life will be improved by smart factories, automated transport systems and connected healthcare networks.

Technology is evolving, and so is the need for cybersecurity. Protecting the same networks that enable innovation against evolving cyber assaults. In future technological infrastructures, quantum-resistant encryption and AI-driven security systems will be necessary to protect digital belongings and maintain trust.

The fusion of Quantum Computing, AI, Robotics, Digital Twins, and Cybersecurity marks the beginning of a new technological era. These innovations are not merely improving existing systems—they are creating entirely new possibilities for solving global challenges and accelerating human progress. The glowing brain serves as a powerful symbol of this transformation, representing a future where machines think smarter, systems operate autonomously, and innovation knows no boundaries. The quantum leap has begun, and the future starts here.



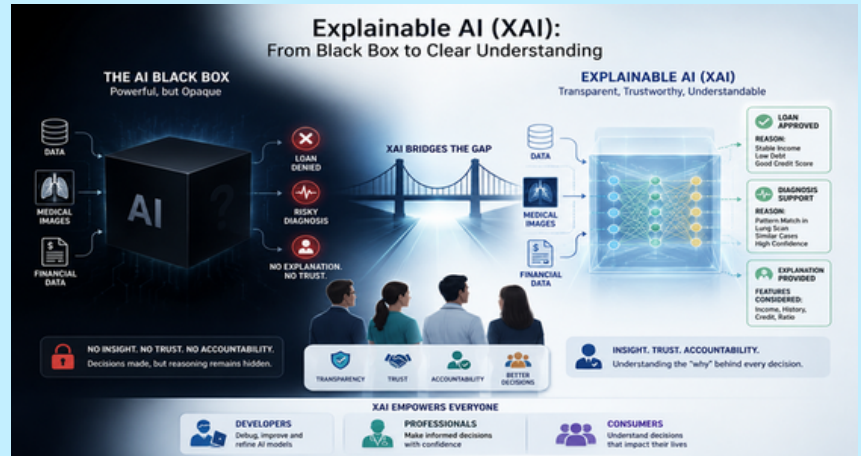
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Unveiling the AI Black Box: Why Explainable AI Matters

Imagine a world where powerful artificial intelligence systems make critical decisions about your life - from your loan applications to your medical treatments-but you have no idea how they arrived at those conclusions. This isn't a dystopian future; it's a present-day challenge posed by what experts call the "AI black box." While AI offers incredible advancements, its opaque nature can erode trust and hinder adoption. This is where Explainable AI (XAI) steps in, acting as a translator between complex algorithms and human understanding.

The Enigma of the Black Box

Many advanced AI models, particularly deep learning networks, operate like a mysterious black box. They take in data, process it through intricate layers of calculations, and produce an output, but the internal workings-the exact reasoning behind a specific decision remain largely hidden. For instance, an AI might accurately diagnose a rare disease from medical images, but if it cannot explain why, it made that diagnosis, doctors might hesitate to trust its recommendations, especially when human lives are at stake. Similarly, a financial institution's AI might deny a loan, but without an explanation, the applicant is left in the dark, unable to understand or appeal the decision.



The Dawn of Explainable AI

XAI aims to open this black box, making AI systems more transparent, understandable, and trustworthy. It's about empowering humans to comprehend, appropriately trust, and effectively manage AI. Think of it like this: instead of a super-smart friend who just gives you answers without showing their work, XAI is the friend who not only provides the correct answer but also walks you through each step of their reasoning.

The evolution of explainability has moved beyond simple post-hoc justifications (explaining after a decision) to inherently explainable AI, where transparency is built into the system's design from the ground up. This means designing AI that can justify its reasoning, show its predictive models' work, and provide interactive explanations tailored to different users, from technical developers to everyday consumers.

The Future is Transparent

As AI continues to integrate deeper into our lives, the demand for transparency will only grow. Companies with mature XAI practices are already seeing significant benefits, including higher AI-driven revenue growth and greater cost reductions. The future of AI is not just about intelligence; it's about intelligible intelligence. It's about building systems that we can understand, trust, and ultimately, collaborate with more effectively.

Explainable AI is not merely a technical advancement; it's a societal necessity. By pulling back the curtain on the AI black box, we pave the way for a future where AI serves humanity with greater accountability, fairness, and confidence.



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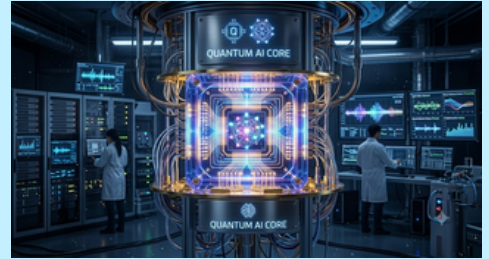
Quantum Computing - Innovation Spotlight

Ideas That Are Shaping Tomorrow

Innovation begins with curiosity. Across the globe, researchers, engineers, and students are developing technologies that are redefining how we live, learn, and work.

Quantum AI

Quantum Artificial Intelligence combines the power of quantum computing with machine learning to solve complex problems beyond the reach of traditional computers. By processing multiple possibilities simultaneously, quantum systems can accelerate model training, optimize massive datasets, and improve decision-making. As the technology matures, Quantum AI is expected to drive breakthroughs in healthcare, finance, robotics, and scientific research, enabling smarter and faster innovations across industries.



Quantum Cryptography

Quantum cryptography is revolutionizing digital security by leveraging the principles of quantum mechanics to protect sensitive information. Unlike conventional encryption, it enables secure key distribution where any attempt to intercept the communication immediately alters the quantum state, revealing the intrusion. This makes quantum cryptography one of the most promising technologies for safeguarding financial transactions, government communications, and critical infrastructure against future cyber threats.

Quantum in Drug Discovery

Developing new medicines is a complex and time-consuming process, often taking years of research and testing. Quantum computing has the potential to transform this by accurately simulating molecular structures and chemical interactions that are difficult for classical computers to model. This capability allows researchers to identify promising drug candidates more efficiently, paving the way for faster treatments, personalized medicine, and improved healthcare outcomes.



Smart Logistics & Optimization

Modern supply chains involve countless variables, from transportation routes and inventory management to delivery schedules. Quantum computing excels at solving these large-scale optimization problems by evaluating numerous possibilities simultaneously. Businesses can use quantum-powered solutions to reduce delivery times, minimize fuel consumption, improve warehouse operations, and build more resilient global supply networks, ultimately saving both time and resources.

Quantum Material Discovery

Discovering advanced materials often requires extensive experimentation and computational analysis. Quantum computers can model the behavior of atoms and molecules with remarkable accuracy, enabling scientists to predict material properties before they are physically created. This accelerates the development of innovative materials such as high-capacity batteries, energy-efficient semiconductors, lightweight aerospace components, and superconductors, supporting progress in renewable energy, electronics, and sustainable technologies.



THE QUANTUM LEAP CHRONICLE: 2026 EDITION



Nature's round-up of innovations that are poised to make a splash in the year ahead.

From quantum computing to mRNA therapeutics: seven technologies to watch in 2026

Nature identified quantum computing as one of the seven transformative technologies expected to shape scientific research and industrial innovation in 2026. Beyond faster computation, it has the potential to revolutionize fields such as drug discovery, materials science, logistics, finance, climate modeling, and cybersecurity. Although universal fault-tolerant quantum computers are still under development, rapid advances in hardware, supported by AI and materials research, along with significant government and private investments, indicate that practical applications are steadily moving from theoretical research toward real-world implementation.



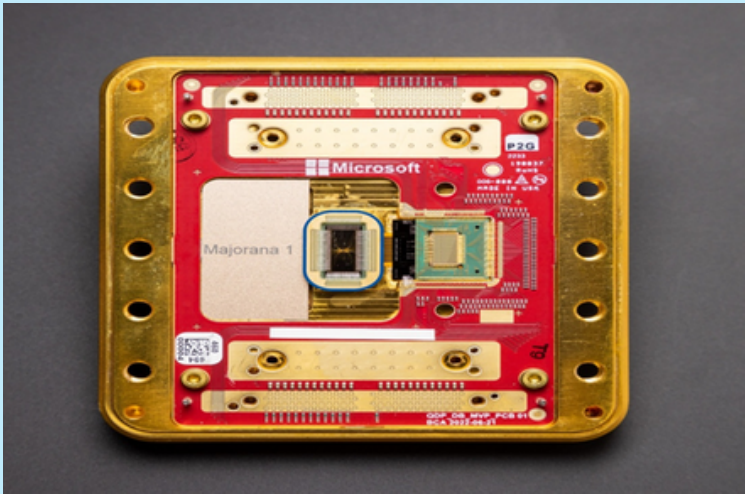
Microsoft's quantum computing technology called into question, again

One of the year's most discussed quantum computing stories involved Microsoft's Majorana-based quantum computing research. A peer-reviewed critique published in Nature questioned whether Microsoft's experimental data provided sufficient evidence for the elusive Majorana quasiparticle, which forms the basis of its topological qubit architecture. Microsoft rejected the criticism, defended its findings, and reaffirmed its goal of delivering a practical quantum computer by 2029. The debate highlights the importance of rigorous peer review, transparency, and reproducibility in advancing frontier scientific research.



Author: Stephen Nellis
Publication: Microsoft
Date: June 24, 2026

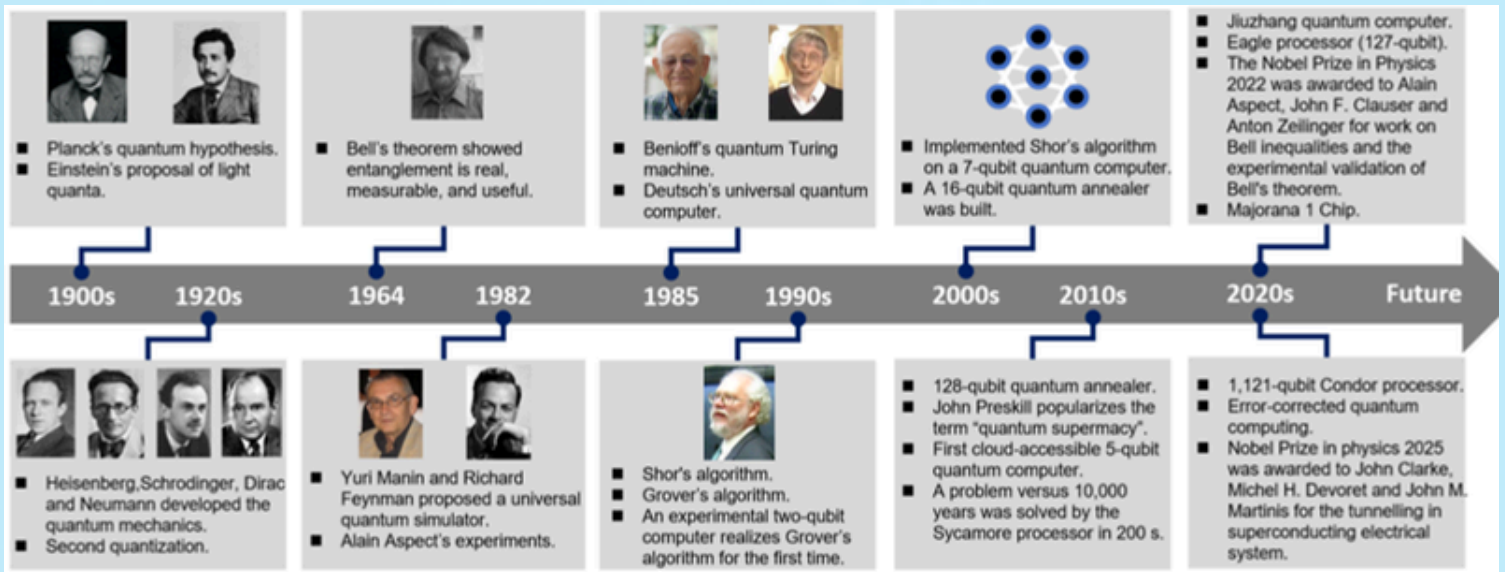
THE QUANTUM LEAP CHRONICLE: 2026 EDITION



Leading physicists question the interpretation of Microsoft's experimental results, igniting a global debate on one of quantum computing's most ambitious technological pursuits.

Majorana Under the Microscope: Microsoft's Quantum Breakthrough Faces Scientific Scrutiny

The Verge examined the technical critique of Microsoft's quantum computing research in greater detail, noting that physicist Henry Legg argued the experimental results could be explained by conventional quantum-dot effects rather than definitive evidence of Majorana particles. Microsoft maintained that its conclusions remain valid and that its topological quantum computing roadmap is unchanged. The discussion highlights the challenges of validating discoveries at the frontiers of quantum physics and the essential role of peer review and independent verification in establishing scientific reliability.



The Rise of Quantum Computing – Take a BITE for Built Environment and Urban Microclimate Research

Quantum computing is expanding beyond cryptography into urban planning and environmental research. Quantum algorithms can model complex factors such as heat distribution, airflow, pollution, and energy consumption, enabling more accurate simulations of urban environments. These capabilities can support sustainable city planning, optimize buildings and transportation, improve energy efficiency, and help develop climate-resilient infrastructure through collaboration across multiple disciplines.



Author: arXiv

Publication: Building Simulation,
Springer Nature

Date: April 2026

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Quantum Leap: Hall of Future

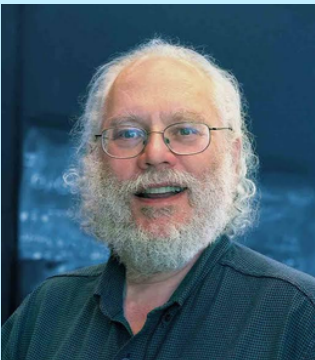


RICHARD FEYNMAN

Richard Feynman is widely regarded as one of the founding visionaries of quantum computing. In 1981, he proposed that classical computers struggle to simulate quantum systems efficiently and suggested building computers that operate according to the principles of quantum mechanics. This revolutionary idea laid the conceptual foundation for quantum computing and inspired decades of research into quantum algorithms, hardware, and applications. His pioneering vision continues to influence scientists working to unlock the full potential of quantum technology.

DAVID DEUTSCH

David Deutsch transformed Richard Feynman's vision into a formal computational model by introducing the concept of the universal quantum computer in 1985. He demonstrated that a quantum computer could perform any computation achievable by a classical computer while also solving certain problems far more efficiently. His theoretical work established the principles of quantum algorithms and quantum gates, making him one of the key architects of modern quantum computing. Deutsch's research continues to shape both academic studies and practical quantum technologies.



PETER SHOR

Peter Shor made one of the most significant breakthroughs in quantum computing with the development of Shor's Algorithm in 1994. The algorithm showed that a quantum computer could factor very large numbers exponentially faster than classical computers, demonstrating a clear computational advantage. This discovery highlighted quantum computing's potential to solve real-world problems and revealed its implications for modern cryptography, motivating global investment in quantum research and the development of quantum-resistant security systems.

JENSEN HUANG

Although not a quantum computing researcher, Jensen Huang has played a vital role in advancing the quantum ecosystem through NVIDIA's accelerated computing platforms. Under his leadership, NVIDIA developed tools such as CUDA-Q that integrate quantum and classical computing, enabling researchers to design, simulate, and optimize quantum algorithms using powerful GPU-accelerated systems. By bridging artificial intelligence, high-performance computing, and quantum technologies, Huang has helped make quantum research more accessible and has accelerated innovation across academia and industry.



The Editorial Board
The Communique

The Dawn of a New Computing Era

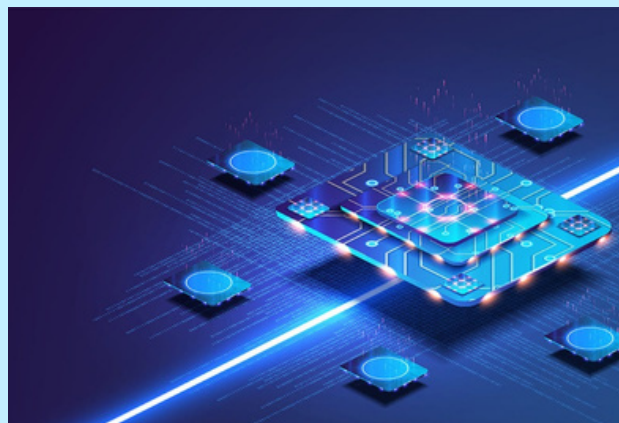
Every decade witnesses a technology that fundamentally reshapes society. We have seen the Internet transform communication, Cloud Computing redefine infrastructure, and Artificial Intelligence augment human capability.

The next leap is Quantum.

While quantum computing is often projected as the next generation of computing, I believe it is much more than that. It represents the next generation of problem solving. From drug discovery and climate modelling to financial optimisation, cybersecurity and advanced manufacturing, quantum technologies have the potential to solve problems that today's computers would struggle to address in any practical timeframe.

India's Opportunity in the Quantum Revolution

For India, this presents a defining opportunity. Our strength has always been our talent pool. Just as India emerged as a global IT powerhouse over the past three decades, the next frontier lies in developing a workforce that is quantum-aware, interdisciplinary and innovation-driven. The National Quantum Mission is an encouraging step in that direction.



The Global Quantum Race

The global race has already begun. Nations are investing heavily in quantum research, infrastructure and talent. The conversation is no longer about whether quantum computing will become mainstream, but who will be prepared when it does.

Equally important is recognising that quantum will not evolve in isolation. Its true potential will emerge through its convergence with Artificial Intelligence, High Performance Computing and secure digital infrastructure. The professionals who understand this convergence will be best positioned to lead the next wave of technological transformation.

The Power of Technological Convergence

Equally important is recognising that quantum will not evolve in isolation. Its true potential will emerge through its convergence with Artificial Intelligence, High Performance Computing and secure digital infrastructure. The professionals who understand this convergence will be best positioned to lead the next wave of technological transformation.

Building a Quantum Mindset

Beyond developing technical expertise, the quantum era demands a mindset of curiosity, adaptability, and continuous learning. As the boundaries between computing, physics, mathematics, and engineering continue to blur, future innovators must embrace interdisciplinary thinking and lifelong learning. Students who cultivate these qualities today will not only adapt to technological change but will also become the architects of tomorrow's breakthroughs, driving innovation that extends far beyond the realm of quantum computing.

Preparing for Tomorrow

The future has always favoured those who prepare before disruption becomes obvious.

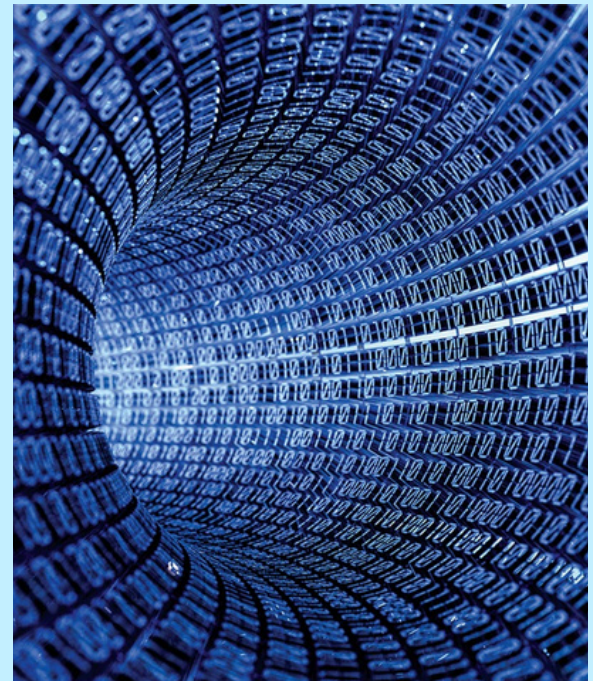
Quantum is not merely another emerging technology. It is a strategic capability that will influence research, industry, national competitiveness and economic growth for decades to come.

Perhaps the most important question before us is not when quantum computing will transform the world.

It is whether we are preparing today's learners to lead that transformation tomorrow.



Dr. Brij Mohan Singh
Professor
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INDUSTRY PULSE

DR. JAYAKUMAR VAITHIYASHANKAR

Founder & CEO, Anuthantra Private Limited
Researcher, Educator, and Quantum Technology Enthusiast



What does the term "Quantum Leap" signify in the context of modern computing and technological advancement?

Throughout history, humanity has witnessed transformative technological revolutions—from the invention of the steam engine and electricity to the rise of computers and the internet. Today, we stand at the threshold of another groundbreaking transformation: Quantum Computing. Often described as the next frontier of computation, quantum technology has the potential to solve problems that are currently beyond the reach of even the most powerful supercomputers. The phrase "Quantum Leap" symbolizes more than scientific progress; it represents a fundamental shift in how we process information, secure communication, discover medicines, optimize industries, and understand the universe itself.

Why Quantum Computing Matters?

As global challenges become increasingly complex, traditional computing approaches are reaching their practical limits. Quantum computing offers new possibilities across multiple domains.

Can you explain how qubits enable quantum computers to outperform classical computers?

Traditional computers process information using bits, which exist in one of two states: 0 or 1. Quantum computers use quantum bits (qubits) that leverage the principles of quantum mechanics.

Unlike classical bits, qubits can exist in multiple states simultaneously through a phenomenon known as superposition. Additionally, qubits can become interconnected through entanglement, allowing information to be correlated in ways that classical systems cannot achieve. These unique properties enable quantum computers to perform certain computations exponentially faster than conventional machines.

What role can quantum computing play in building a more sustainable future?

Quantum computing can help address global environmental challenges by simulating complex natural systems and optimizing sustainable technologies. Its applications include climate forecasting, renewable energy optimization, advanced battery development, carbon capture, and sustainable agriculture, supporting efforts toward a greener future.

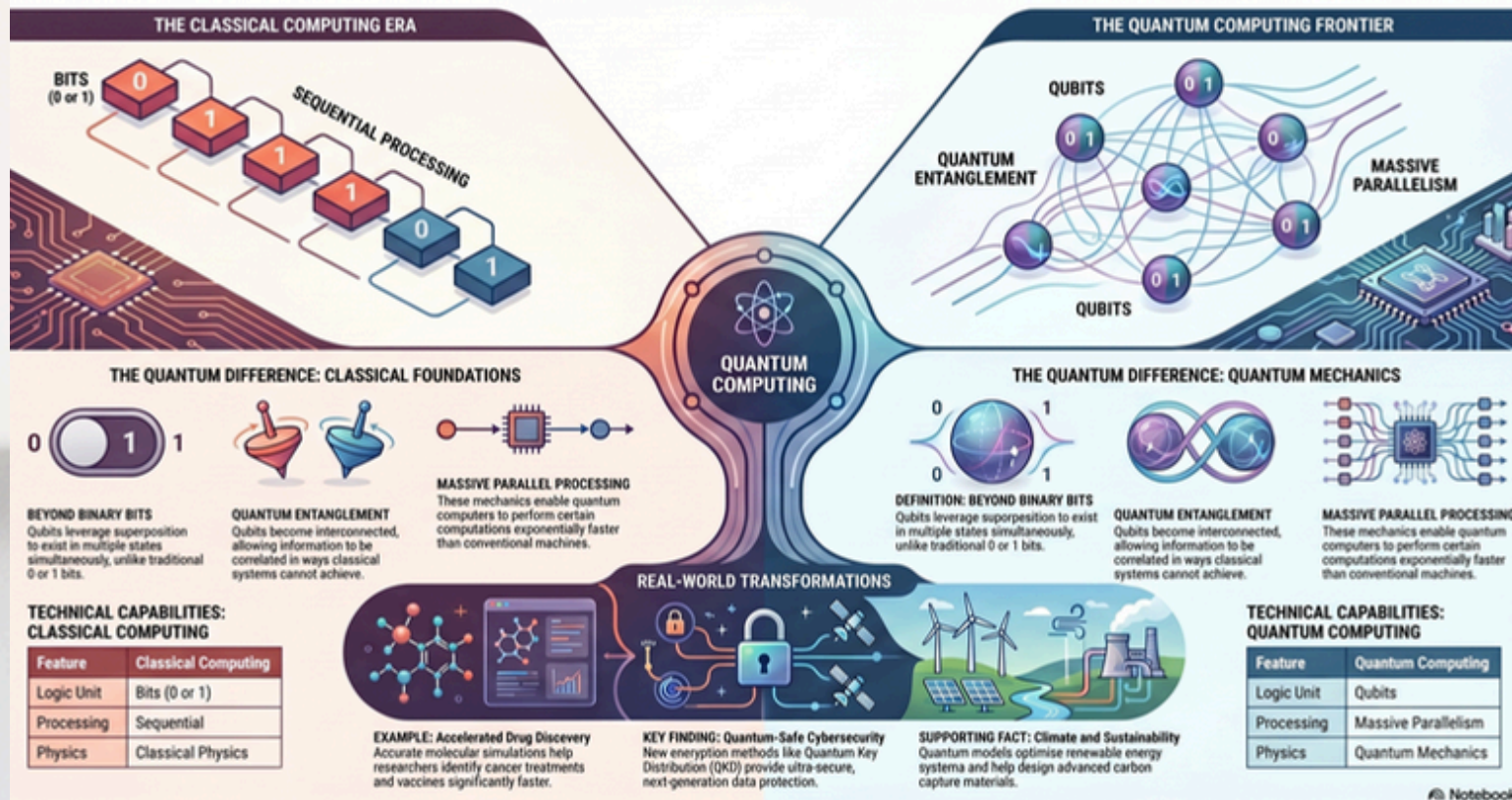
Why is quantum computing considered both a challenge and an opportunity for cybersecurity?

Modern digital security relies on mathematical problems that are extremely difficult for classical computers to solve. However, powerful quantum computers could eventually break many of today's encryption methods, creating new cybersecurity challenges. At the same time, quantum technologies are driving the development of quantum-safe cryptography, Quantum Key Distribution (QKD), and highly secure communication systems designed to protect sensitive information in the quantum era.

Why is the combination of quantum computing and Artificial Intelligence considering a game-changer?

Quantum computing has the potential to significantly accelerate artificial intelligence by improving optimization, pattern recognition, and large-scale data analysis. Future quantum-enhanced AI systems could train complex models faster, deliver more accurate predictions, and enable smarter automation and decision-making across industries.

Quantum Leap: Navigating the New Frontier of Computation



How can students prepare themselves for careers in quantum computing?

The growing quantum industry offers exciting career opportunities for students and researchers. Building a strong foundation in quantum computing, mathematics, Python programming, machine learning, and cryptography, along with hands-on experience using platforms such as IBM Quantum Experience, Qiskit, Cirq, PennyLane, and Azure Quantum, can prepare learners for careers in quantum software, research, cybersecurity, artificial intelligence, and hardware development.

What are the biggest challenges that need to be overcome before quantum computing becomes widely accessible?

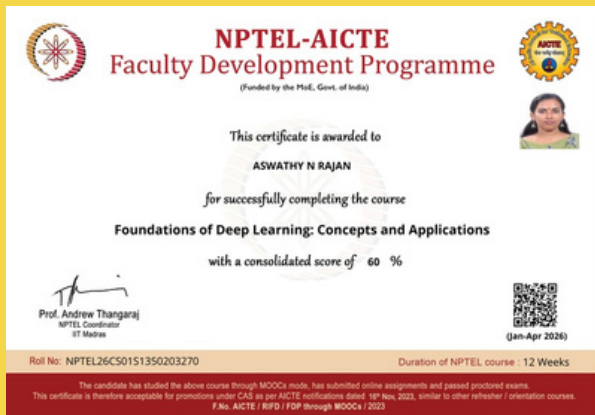
Although quantum computing has made remarkable progress, significant challenges remain. Improving qubit stability, reducing computational errors, scaling quantum systems, lowering infrastructure costs, and transitioning to quantum-safe security are among the major hurdles researchers continue to address. As these challenges are overcome, practical quantum computing is expected to become increasingly accessible in the years ahead.

How do you envision quantum computing transforming the world over the next decade?

Every technological revolution begins with curiosity and the courage to explore new possibilities. Quantum computing represents the next major leap, with the potential to transform industries ranging from healthcare and finance to education and manufacturing. As the foundations of the quantum era are being built today, students, researchers, and innovators have a unique opportunity to shape its future. More than faster computers, quantum technology promises new ways to solve some of humanity's greatest challenges.

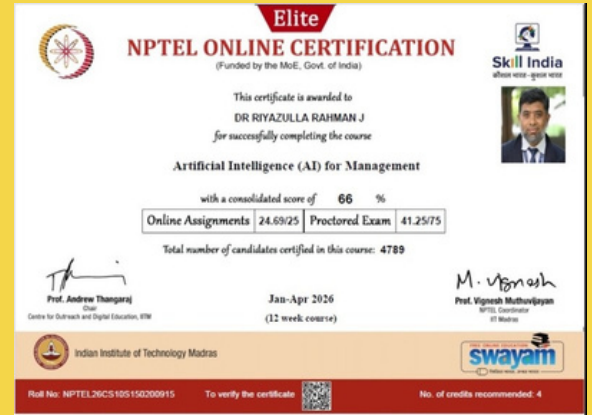
Quantum computing is not just the future of technology; it is the future of innovation. The students who begin exploring it today will be the pioneers shaping tomorrow's world.

NPTEL STARS

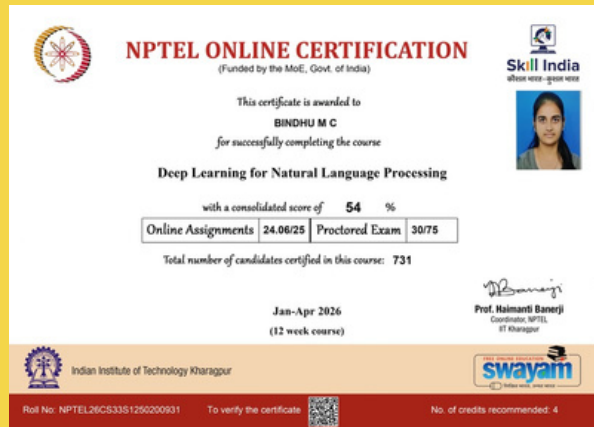


Ms. Aswathy Ranjan
Assistant Professor

Foundations of Deep Learning: Concepts and Applications

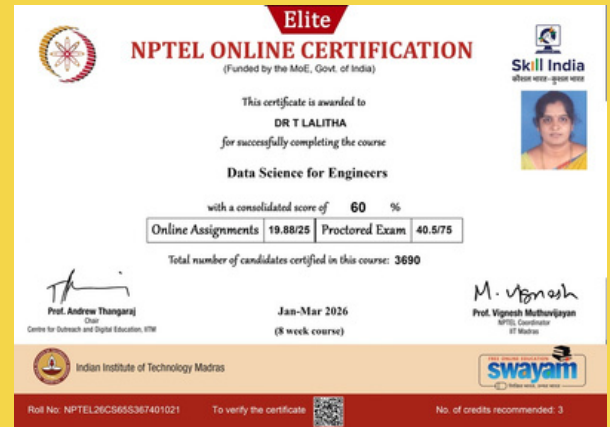


Dr. Riyazulla Rahaman J
Assistant Professor – Senior Scale
Artificial Intelligence for Management



Ms. Bindhu M C
Assistant Professor

Deep Learning for Natuatural Language Processing



Dr. T Lalitha
Professor
Data Science for Engineers



Mr. Faizan Anwar Khan
Assistant Professor
Neural Networks for Computer Vision and Natural
Language Processing



Dr. Kimmi Kumari
Assistant Professor – Senior Scale
Natural Language Processing

NPTEL STARS



Ms. S Vanitha
Assistant Professor
Programming in Java



Dr. N Baskar
Associate Professor
Cloud Computing



Dr. Kimmi Kumari
Assistant Professor - Senior Scale
Blockchain and its Applications



Dr. Nithya S
Assistant Professor
Introduction to Machine Learning



Ms. Aswathy Ranjan
Assistant Professor
Cloud Computing and Distributed Systems



Dr. N Thrimoorthy
Assistant Professor - Senior Scale
Cloud Computing

Research Frontiers

Dr. Hashmat Fida published a research paper titled "Smart Flow-X: A Data-Driven Urban Intelligence and Coordination Framework for Real-Time Systems" in the prestigious journal Computer Networks (Q1 Journal), introducing an AI, IoT, and UWB-enabled framework for intelligent traffic management that enhances emergency response through dynamic green corridors and real-time urban coordination.



Dr. Hashmat Fida
Assistant Professor

Mr. Faizan Anwar Khan received the Best Oral Presentation Award at ICMSCI-2026 for his research paper, "A Predictive Model for Liver Disease Detection Using Machine Learning Techniques," recognizing the quality, originality, and impact of his work in AI-driven healthcare.



Mr. Faizan Anwar Khan
Assistant Professor

Ms. Aswathy N. Rajan co-authored the research paper "Explainable Deep Learning Pipeline for Multimodal Biomedical Signal Interpretation," presenting an AI-driven framework that combines explainable deep learning with multimodal biomedical signals to enable accurate, transparent, and reliable clinical decision support.



Ms. Aswathy N. Rajan
Assistant Professor

Dr. C. Komalavalli was granted an Indian Patent for the invention of "Optimizing Smart Ambulances: Incorporating Fingerprint Sensors for Patient Identification, Monitoring, and Tracking via IoT and Cloud Integration," advancing intelligent healthcare through secure, real-time patient monitoring and emergency response.



Dr. C. Komalavalli
Professor

Mr. Himanshu Sekhar Rout successfully completed the Artificial Intelligence and Machine Learning Program conducted by the Indian Council for Technical Research and Development (ICTRD), strengthening his expertise in AI and ML to advance innovation and research excellence.



Mr. Himanshu Sekhar Rout
Assistant Professor

Research Frontiers

Dr. T. Lalitha successfully completed the NPTEL - AICTE Faculty Development Programme on Data Science for Engineers, enhancing her expertise in data science and its applications in modern engineering education.



Dr. T Lalitha
Professor

Dr. N. Baskar co-authored the research paper "Deep Learning-Based Computer Vision Techniques for Real-Time Object Detection and Recognition," presenting a lightweight YOLOv8n-based framework for efficient real-time object detection in resource-constrained environments.



Dr. N Baskar
Associate Professor

Dr. Kuppala Saritha was granted an Indian Patent for the invention "Smart Laptop Adjuster Device," reflecting her contribution to innovative ergonomic technology aimed at enhancing user comfort and productivity.



Dr. Kuppala Saritha
Professor

Dr. Afroj Alam co-authored the Springer book chapter "Harnessing Synthetic Sensor Data Using Generative Adversarial Network for Smarter Medical Diagnostics" in the book Sensor Signal Processing for Intelligent Systems (Studies in Computational Intelligence, Vol. 1275), highlighting the application of Generative Adversarial Networks (GANs).



Mr. Afroj Alam
Assistant Professor

Dr. Riyazulla Rahman J co-authored the Scopus-indexed research article "Psychologically Responsive AI Smart Classroom: Technological and Educational Challenges," exploring AI-powered smart classrooms that adapt to students' emotional and cognitive states, fostering more personalized, responsive, and effective learning environments.



Dr. Riyazulla Rahaman J
Assistant Professor-Senior Scale

Dr. T. Lalitha presented the research paper "A Study on Secure Hybrid Intelligent Ecosystem for Learning and Detection in Network Environments: SHIELD-NET" at the International Conference on Recent Trends in Engineering and Technology (ICRTET - 2026).



Dr. T Lalitha
Professor

Research Frontiers

Dr. Srabana Pramanik has authored a book chapter, "Introduction to Smart Cities and Security Challenges," in the book Securing Smart Cities With Quantum-Enhanced Deep Learning published by IGI Global (2026).



Dr. Srabana Pramanik
Assistant Professor - Senior Scale

Mr. Suhel Khan co-authored a book chapter titled "AI-Powered Customer Support Chatbot Leveraging Feedforward Neural Network Architecture," published in Smart Technologies and Intelligent Computing by CRC Press.



Mr. Suhel Khan
Assistant Professor

Ms. Neha Arora, Ms. Priyanka Savadekar, and Dr. Debasmita Mishra has co-authored the book chapter, "Wi-Fi-Signal-Based Gesture Recognition and Image Processing for Assistive Technologies: A Machine Learning Perspective," published in the Springer book Sensor Signal Processing for Intelligent Systems.



Ms. Neha Arora
Assistant Professor



Dr. Debasmita Mishra
Assistant Professor



Ms. Priyanka Niranjana
Assistant Professor

Mr. S. Vanitha has published a Scopus-indexed conference paper titled "Hybrid Framework for Coronary Stenosis and Brain Tumor Detection" in the Proceedings of the 9th International Conference on Inventive Computation Technologies (ICICT 2026).



Mr. S. Vanitha
Assistant Professor

Dr. K. S. Harishkumar has published the research paper, "HIDRA-Rec for Web-Scale Ubiquitous Context-Aware Intelligent Recommendation with Hierarchical Diffusion and LLM-Guided Streaming Adaptation," in the Journal of Web Engineering.



Dr. K. S. Harishkumar
Assistant Professor

DEPT NEWS

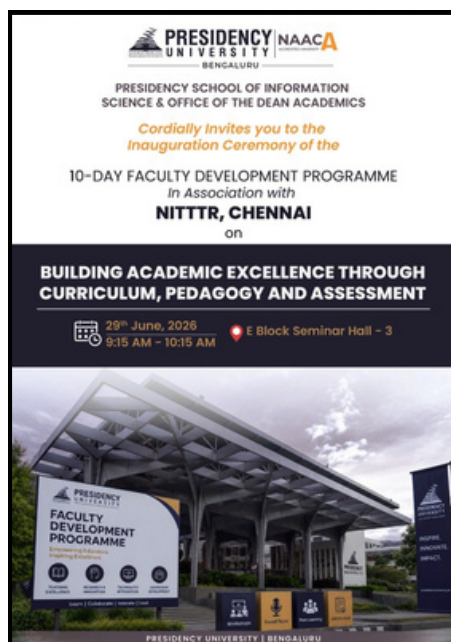
● M.Tech/MCA

● B.Tech

● BCA

● B.Sc.

10-Day Faculty Development Programme on Building Academic Excellence through Curriculum, Pedagogy and Assessment



The Presidency School of Information Science, in association with the National Institute of Technical Teachers Training and Research (NITTTR), Chennai, and the Office of the Dean Academics, successfully organized a 10-Day Faculty Development Programme on "Building Academic Excellence through Curriculum, Pedagogy and Assessment" from 29 June to 10 July 2026.

The programme was convened by Dr. Mahalakshmi R and Dr. Jothi Basu, with Dr. M. Renukadevi and Dr. Vetrimani Elangovan serving as Co-Convenors. Coordinated by Dr. Saravana Kumar S, Ms. Yogeetha B, Ms. Devi S, Ms. Ghazala Zameer, Ms. Anjana D, Ms. Akshatha G. R, and Mr. Dinesh N, the FDP witnessed the enthusiastic participation of 45 faculty members. Expert resource persons from NITTTR Chennai delivered interactive sessions on Outcome-Based Education, innovative pedagogy, AI-enabled teaching, curriculum design, assessment strategies, mentoring, and quality assurance, empowering participants with contemporary teaching practices aligned with NBA and NAAC requirements.



The programme fostered a culture of continuous professional development by encouraging faculty to adopt learner-centric teaching methodologies and innovative assessment practices. It also provided an excellent platform for knowledge sharing, collaboration, and strengthening academic excellence across disciplines.



DEPT NEWS

● M.Tech/MCA

● B.Tech

● BCA

● B.Sc.

Orientation Programme 2026 of BCA and B.Sc. – A New Chapter Begins

The Presidency School of Information Science warmly welcomed the incoming BCA and B.Sc. students through the Orientation Programme 2026, held on 29 June 2026 at Presidency University, Bengaluru. The programme introduced students to the University's academic vision, industry-oriented curriculum, research opportunities, certifications, internships, and vibrant campus life.

A key highlight was the inspiring keynote address by Ms. Sushma Chakkirala, Executive Director, JPMorgan Chase & Co., Bengaluru, who encouraged students to embrace continuous learning, adaptability, and innovation. Interactive sessions with the University leadership and faculty familiarized students with academic expectations, student support services, and holistic development opportunities. The programme concluded on a motivating note, inspiring students to embark on their academic journey with confidence and a commitment to excellence.



DEPT NEWS

● M.Tech/MCA

● B.Tech

● BCA

● B.Sc.

Industrial Visit to Karnataka State Natural Disaster Monitoring Centre (KSNDMC), Bengaluru

The School of Information Science organized an industrial visit to the Karnataka State Natural Disaster Monitoring Centre (KSNDMC), Bengaluru, for the students of 6BCA (AI & ML). The visit was coordinated by Dr. S. Satheesh Kumar and Prof. Keren L. Daniel, who accompanied 34 students throughout the visit.

Participants attended insightful sessions conducted by Dr. Rashmi, Junior Scientific Officer, and Mr. Gangadhara, Project Scientist, who demonstrated advanced disaster monitoring technologies, including telemetric rain gauges, GIS-based satellite monitoring, and disaster data management systems. The visit provided practical exposure to disaster preparedness and mitigation, successfully bridging classroom learning with real-world applications while inspiring students to explore careers in disaster management and environmental technology.



DEPT NEWS

● M.Tech/MCA

● B.Tech

● BCA

● B.Sc.

Academic Visit to IIIT Bangalore

The School of Information Sciences, Presidency University, organized an academic visit to the International Institute of Information Technology Bangalore (IIIT-B) to explore opportunities for academic collaboration, research partnerships, and knowledge exchange.

During the visit, the faculty members interacted with the Head of the AI & Data Science Department, the Dean (Academics), and the Directors/In-charges of various research laboratories. The team toured several cutting-edge research facilities, including the Machine Intelligence and Robotics Centre (MINRO), Multimodal Perception Lab, Networking and Communication Research Lab (NCRL), Scalable Data Science and AI (ScaDS.ai) Lab, Robotics Studio, Samsung Chip Design Lab, and the COMET (Communication Systems and Networks Technology Innovation Hub) Foundation.

The visit provided valuable insights into emerging technologies, ongoing research initiatives, and potential areas for collaboration. The interactive discussions were highly enriching and opened new avenues for future academic and research engagements between the two institutions.

The school extends its sincere gratitude to the Pro Vice Chancellor for his encouragement and support in facilitating this initiative. Appreciation is also extended to the IIIT Bangalore team for their warm hospitality and insightful interactions.



DEPT NEWS

● M.Tech/MCA

● B.Tech

● BCA

● B.Sc.

From Classroom to Startup: Our MCA Alumni Turn Their Vision into Reality

We are proud to celebrate another remarkable achievement by our alumni!

The School of Information Sciences, Presidency University, congratulates our MCA alumni from the 2024 Batch—Sashank, Rakshit Gowda, Pawan, Karthik, and Ms. Jyotika on launching their startup, mySalonGo.in, an innovative platform that connects customers with nearby salons through seamless appointment booking while empowering salons to streamline operations, increase visibility, and deliver an enhanced customer experience.

We are delighted that Salon Go Tech has signed an Incubation Agreement with the Presidency Launchpad Association (PLA). Through this partnership, the startup will receive mentorship, guidance, and incubation support to scale its technology-driven solution and strengthen its entrepreneurial journey.

At the Presidency School of Information Sciences, we take immense pride in nurturing innovators and entrepreneurs who transform ideas into impactful ventures. We wish the entire Salon Go Tech team continued success as they build and grow their startup.



QUANTUM BYTES

A qubit can exist as both 0 and 1 simultaneously through superposition.

Quantum cryptography enables communication that is virtually impossible to intercept without detection.

More than 30 countries have launched national quantum initiatives to accelerate research and innovation.

Quantum computers complement—not replace—classical computers by solving highly complex problems.

Researchers are exploring quantum computing to accelerate drug discovery, genome analysis, and precision medicine.

The future of transportation combines AI, IoT, Quantum Computing, and 6G for safer autonomous mobility.

Quantum computing will be accessible through cloud platforms, making advanced computation available worldwide.

The jobs of tomorrow will demand skills in AI, Quantum Technologies, Cybersecurity, Robotics, and Data Science.

QUANTUM GLOSSARY



Qubit

The basic unit of quantum information. Unlike a classical bit (0 or 1), a qubit can exist in multiple states simultaneously.

Superposition

A quantum property that allows a qubit to represent both 0 and 1 at the same time until it is measured.

Entanglement

A phenomenon where two or more qubits become linked, so the state of one instantly influences the other, regardless of distance.

Quantum Gate

A logical operation that changes the state of qubits, similar to how logic gates work in classical computers.

Cryogenic Cooling

The process of cooling quantum processors to temperatures close to absolute zero to keep qubits stable and functional.

Quantum Decoherence

The loss of a qubit's quantum state due to interaction with its environment, making computations prone to errors.

QUANTUM FUTURE LAB

THEN

NOW

NEXT

Manual Healthcare
Diagnosis

AI-assisted
Diagnosis

Quantum-powered
Precision Medicine

Desktop
Computers

AI-enabled PCs

Quantum
Computers

Traditional
Classrooms

Smart & Hybrid
Learning

Immersive XR
Classrooms

Passwords

Face &
Fingerprint
Authentication

Quantum-Secure
Authentication

UNWIND ZONE

Across:

1. Performs logical operations on qubits. (4)
2. Quantum state property affecting interference. (5)
6. Sequence of quantum gates. (7)
7. Light particle carrying quantum information. (6)
8. Computing using quantum mechanics. (7)
10. Particle used to realize qubits. (4)
11. Charged particle used as a qubit. (3)
13. Company developing superconducting quantum computers. (3)
16. Quantum property used to encode qubits. (4)
17. Family of fundamental quantum gates. (5)
18. Mathematical description of a quantum system. (5)
19. Incorrect outcome due to noise. (5)
15. Lose quantum information to the environment. (8)

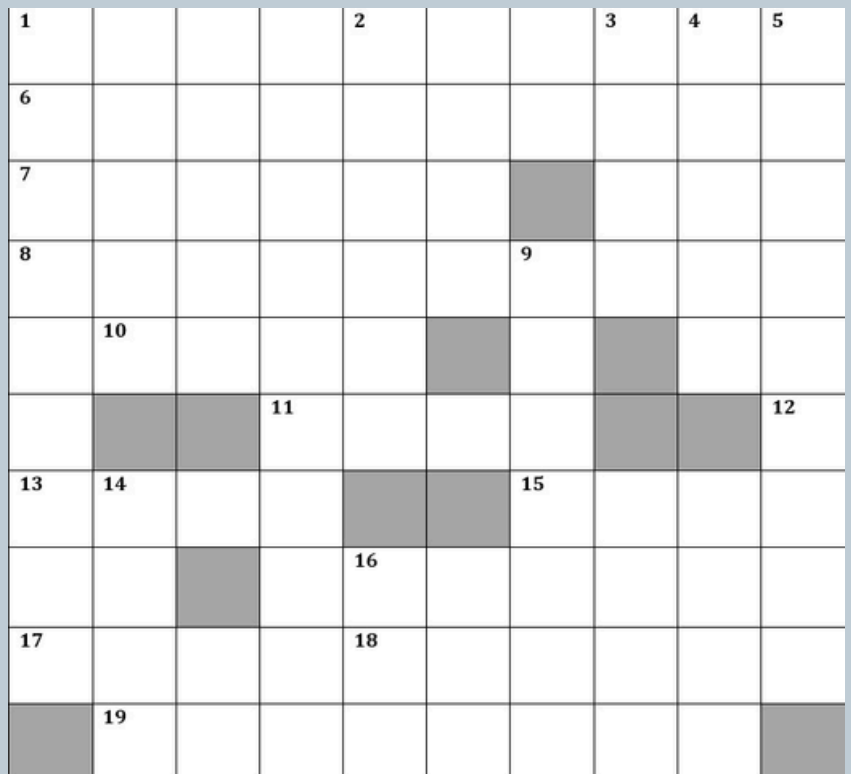
Down:

8. Basic units of information in a quantum computer. (6)
3. Quantum algorithm for efficient integer factorization. (4)
4. Describes characteristic values or states in quantum mechanics. (5)
5. Set of rules governing computational operations. (5)
12. Two-qubit gate used to create entanglement. (4)
9. Process of reading the value of a qubit. (7)
14. Basic unit of classical digital information. (3)

Smart World Around Us: IoT & Technology Crossword Puzzle



Ms. Lekhya Sree
Assistant Professor
Presidency School of Information Science
Presidency University, Bengaluru



Quantum Leap: The Future Starts Here.

factoring, what are the factors of 9025?

Quantum computer: 7 and 11.

Interviewer: that's not even close

Quantum computer: yeah, but it was fast.



WHAT IF I TOLD YOU

**QUANTUM COMPUTERS ALREADY
EXIST AND CAN BREAK
BITCOIN AND BLOCKCHAIN
PASSWORDS WITHIN SECONDS**



Normal Computer



Quantum Computer



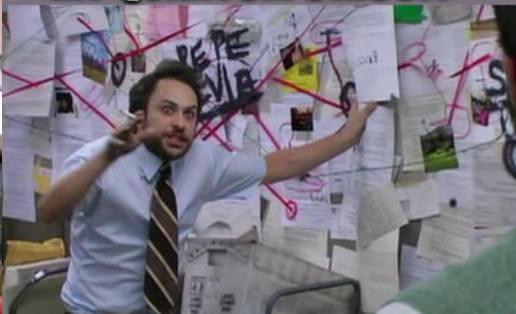
NORMAL COMPUTERS:



QUANTUM COMPUTERS:



**ME TRYING TO REDUCE
MY QUANTUM CIRCUIT**



Classical computer

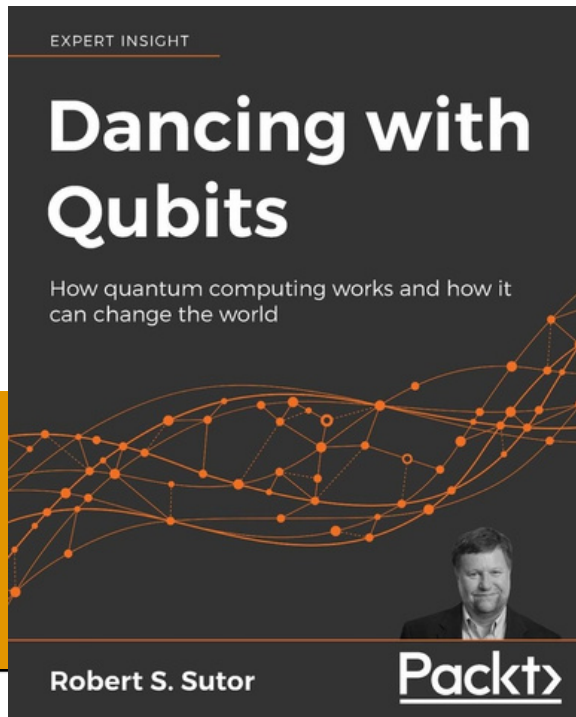


Quantum computer



VS.

**Best
Seller**



Book Review

Book Review: Dancing with Qubits
Author: Robert S. Sutor
Genre: Computer Science
Rating: (4.5/5) ★★★★★

Dancing with Qubits is an engaging and accessible introduction to the fascinating world of quantum computing. Written by Robert S. Sutor, a renowned quantum computing expert and former IBM executive, the book bridges the gap between complex quantum mechanics and practical computing applications. Rather than relying heavily on mathematics, the author explains quantum concepts through real-world analogies, historical context, and intuitive examples, making the subject approachable for students, professionals, and technology enthusiasts.

The book explores the foundations of quantum computing, including qubits, superposition, entanglement, quantum gates, and quantum algorithms. It also discusses how quantum computers differ from classical computers, the current state of quantum technology, and its potential impact on industries.

★ Why Read It?

- Explains quantum computing concepts in a simple, non-mathematical manner.
- Covers fundamental principles such as qubits, superposition, entanglement, and quantum gates.
- Introduces important quantum algorithms and their real-world significance.

✓ Strengths

- Easy-to-understand explanations with relatable analogies.
- Balanced coverage of both theory and practical applications.
- Focus on real-world impact rather than abstract physics.
- Includes historical evolution and future roadmap of quantum computing.

⚠ Criticism & Limitations

- Some advanced quantum algorithms are explained only at a conceptual level.
- Readers seeking mathematical derivations or detailed quantum mechanics may require additional resources.
- A few sections assume basic familiarity with computing concepts.

★ Final Verdict

Dancing with Qubits is an excellent beginner-friendly guide to quantum computing. With clear explanations, practical insights, and engaging examples, it provides a strong foundation for students, educators, researchers, and technology enthusiasts interested in the future of quantum technologies.

**Warm Regards,
The Editorial Board**



In today's digital world, constant notifications, social media, and multitasking make it difficult to concentrate on meaningful work. In *Deep Work*, Cal Newport argues that the ability to focus intensely without distraction is one of the most valuable skills in the modern workplace. He introduces the concept of "deep work"—the practice of working with complete concentration on cognitively demanding tasks to produce high-quality results in less time.

The book explains why deep work is becoming increasingly rare yet more valuable than ever. Newport combines scientific research, real-life examples, and practical strategies to help readers develop habits that improve productivity, creativity, and learning. Rather than simply working harder, the book teaches readers how to work smarter by minimizing distractions and maximizing focus.

Why Read It?

- Helps improve concentration and eliminate digital distractions.
- Provides practical techniques for developing deep focus.
- Explains how focused work enhances learning, creativity, and productivity.
- Encourages better time management and effective study habits.
- Offers actionable strategies for students preparing for exams, placements, and competitive careers.

DEEP WORK

Book Review: Deep Work

Author: Cal Newport

Genre: Self-Help / Productivity / Personal Development

Rating: (4.5/5) ★★★★★

✓ Strengths

- Introduces the concept of Deep Work versus Shallow Work.
- Explains the science behind focus and cognitive performance.
- Provides practical routines for minimizing interruptions.
- Includes inspiring examples from successful professionals and researchers.
- Offers simple methods to build long-term productivity habits.

⚠ Criticism & Limitations

- Some strategies may be difficult to implement in highly collaborative or office-based environments.
- Requires consistent discipline and habit-building to see lasting results.
- Certain recommendations may feel repetitive for readers already familiar with productivity books.
- Includes inspiring examples from successful professionals and researchers..

★ Final Verdict

Deep Work is an inspiring and practical guide for students and professionals who want to improve focus and achieve meaningful results. Its simple yet powerful principles make it an essential read for anyone aiming to excel in academics, career, and personal growth in today's distraction-filled world.

Warm Regards,
The Editorial Board

Upcoming Faculty Development Programmes(FDPs)

Institute Name	FDP Thrust Area	FDP Title	Start Date	End Date	Link for registration
Research foundation of India	Engineering and Management	Extensible AI for Smarter Research: Tools that Save Time and Improve Quality	20-07-2026	24-07-2026	https://researchfoundationofindia.com/ai-research-quality/
KIT-Kalaignarkarunani dhi Nanidhi Institute of Technology	Engineering and Management	Next-Generation Healthcare Data Protection Using Quantum Cryptography	27-07-2026	1-08-2026	https://atalacademy.aicte.gov.in/participant/workshop
IIM Bangalore	Engineering and Management	Empower 2.0 Crafting Digital Learning Experiences	17-07-2026	18-07-2026	https://iimbx.iimb.ac.in/fdp-2026/
Bangalore Institute of Technology	Engineering and Management	Applied Quantum Intelligence: GenAI, Prompt Engineering & Agentic Systems for Engineering Research.	3-08-2026	8-08-2026	https://atalacademy.aicte.gov.in/participant/workshop
Research foundation of India	Engineering and Management	Innovative Teaching and Learning Pedagogy	17-8-2026	22-08-2026	https://researchfoundationofindia.com/teaching-pedagogy-learn/

Upcoming Research Proposals

Upcoming Research Proposals from June 2026

Sr.No	Details of Proposal	Details of proposal Link	Important Dates
1	Call for Proposals for Building U.S.–India Partnerships to Drive Innovation in Critical Minerals & Quantum Technology	https://www.indiascienceandtechnology.gov.in/announcementsopportunity/call-proposals-building-us%E2%80%93india-partnerships-drive-innovation-critical-minerals-quantum-technology	The last date for submission is 31st July 2026
2	ICSSR-NSTC (Taiwan) Joint Call for Research Proposals 2026	https://icssr.org/announcements/icssr-nstc-taiwan-joint-call-research-proposals-2026	The last date for submission is 3rd August 2026
3	India Finland Joint Innovation Call 2026	https://tdb.gov.in/launch-india-finland-joint-innovation-call-2026	The last date for submission is 28th August 2026
4	Internal Seed Grants, Presidency University	Please fill out this https://forms.office.com/r/D2KnvTFEXdform	The last date for submission is 16th August 2026

Upcoming Conferences

Upcoming Conferences in 2026					
Sr. No	Institute Name	Conference Name	Date	Link of WebPage	Last Date of Paper Submission
1	Politeknik Negeri Bali, Kampus	1st International Conference on Artificial Intelligence for Sustainable Development	2-4 September, 2026	https://www.ai4sd.com/	7/30/2026
2	BITS Pilani	2026 5th Edition of IEEE Delhi Section Flagship Conference (DELCON)	19- 21 November, 2026	https://www.netcrypt.org.in/	7/15/2026
3	National Institute of Technology Uttarakhand, INDIA & Maulana Azad National Institute of Technology Bhopal, INDIA	10th IEEE India International Conference On Power Electronics (IICPE-2026)	13- 15 December, 2026	https://nituk.ac.in/iicpe2026/	7/15/2026
4	National Institute of Technology Manipur	2026 IEEE Silchar Sub Section Conference (IEEE SILCON-2026)	18 - 20 December, 2026	https://ieeesilcon.org.in/	6/8/2026
5	Siksha O Anusandhan University, Bhubaneswar, India	1st International Conference on Advances in Intelligence Systems, Security, and Cybernetics	29-30 January, 2027	https://www.aiss2c.in/	8/10/2026

UPCOMING EVENTS

6 August 2026

Conference on
Advances in
Computer
Engineering and
Communication
Systems

27 August 2026

CSI-Students
Chapter Inauguration

29 August 2026

Fresher's Day
(AARAMBH)

5 September 2026

Teachers' Day

15 September 2026

Engineer's Day

15-17 September
2026

FDP on Data Analysis
and Decision Making
Using Statistical Tools

29 October
2026

Guest Lecture on
Generative AI

29 October 2026

AI Ethics and
Cybersecurity
Conclave: Expert
Panel Discussion &
Project Expo

31 October 2026

Global Education Fair -
2026

THE WRAP UP



As this edition of The Communique comes to a close, we reflect on the theme “Quantum Leap: The Future Starts Here”. We are living in an era of unprecedented technological progress, where breakthroughs in quantum computing, artificial intelligence, sustainable innovation, and digital transformation are redefining the future. Every bold idea and scientific discovery brings us one step closer to a world driven by creativity, collaboration, and limitless possibilities.

Key Takeaways from This Edition

- **Embracing Transformative Innovation:** Quantum leaps begin with bold thinking, encouraging individuals to challenge conventions and develop solutions that shape a better future.
- **Technology with Purpose:** Emerging technologies such as quantum computing, artificial intelligence, robotics, and automation have the potential to solve complex global challenges when applied responsibly.
- **Interdisciplinary Collaboration:** The future belongs to those who connect knowledge across disciplines, combining science, technology, creativity, and entrepreneurship to drive meaningful progress.
- **Continuous Learning and Adaptability:** In a rapidly evolving world, curiosity, lifelong learning, and the willingness to embrace change are essential for personal and professional growth.
- **Building a Sustainable Tomorrow:** Innovation must go hand in hand with sustainability, ensuring that technological advancements contribute to a greener, more inclusive, and resilient world.
- **Empowering Future Leaders:** By inspiring students, researchers, and young professionals to dream big and innovate fearlessly, we pave the way for breakthroughs that will define generations to come.



Final Thoughts

Quantum Leap: The Future Starts Here is more than a theme it is a call to imagine boldly, innovate responsibly, and create fearlessly. Every great transformation begins with a single idea, nurtured by determination and guided by purpose. As we continue to explore new frontiers, let us embrace the spirit of discovery, push beyond boundaries, and work together to build a future where innovation becomes the foundation of lasting progress.

Vision of Presidency School of Computer Science and Engineering

Vision	To be a value-driven global University, excelling beyond peers, creating professionals of integrity and character, and having concern and care for society.
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Mission of Presidency School of Computer Science and Engineering

Mission	Commit to be an innovative and inclusive institution by seeking excellence in teaching, research, and knowledge.
Mission	Pursue research and development and its dissemination to the community at large.
Mission	Create, sustain, and apply learning in an interdisciplinary environment with consideration for ethical, ecological, and economic aspects of nation-building.
Mission	Provide knowledge-based technological support and services to the industry in its growth and development.
Mission	To impart globally applicable skill sets to students through flexible course offerings, support industry's requirements, and inculcate a spirit of new venture.

PROGRAM SPECIFIC OUTCOMES (PSOs) FOR B.TECH

PSO1	Problem Analysis: Identify, formulate, research literature, and analyse complex engineering problems related to Software Engineering principles and practices, Programming and Computing technologies reaching substantiated conclusions using first principle of Mathematics, Natural Sciences and Engineering Sciences.
PSO2	Design/development of Solutions: Design solutions for complex engineering problems related to Software Engineering principles and practices, Programming and Computing technologies 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.
PSO3	Modern Tool usage: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modelling to complex engineering activities related to Software Engineering principles and practices, programming and computing technologies with the understanding of the limitations.

Vision of Presidency School of Information Science

Vision	To be a global centre of excellence in information science and research, fostering innovation and producing professionals with integrity and ethical responsibility.
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Mission of Presidency School of Information Science

Mission	To provide high-quality education in information science, equipping students with strong technical expertise and problem-solving skills.
Mission	To promote research and innovation in information science and technology, addressing real-world challenges through industry collaboration.
Mission	To nurture graduates with strong ethical values and a commitment for lifelong learning for sustained professional growth in the IT sector and allied fields.

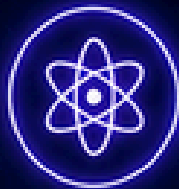
PROGRAM SPECIFIC OUTCOMES (PSOs) FOR BCA

PSO1	Disciplinary knowledge: Demonstrate comprehensive knowledge and understanding of Computer Applications, Data Science and AI/ML techniques.
PSO2	Problem Solving: Identify, formulate and apply appropriate techniques in the areas related to Software development, Big data, Network, Cloud computing technologies and related domains of varying complexities in real-time applications.
PSO3	Design/development of Applications: Design, develop, and test full stack applications by applying principles of software engineering, addressing real-world requirements across various domains.

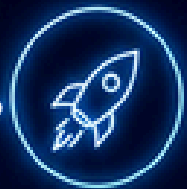
QUANTUM LEAP:

THE FUTURE STARTS HERE

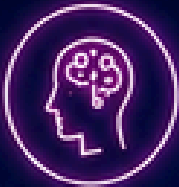
IMAGINE. INNOVATE. TRANSFORM.



QUANTUM
COMPUTING



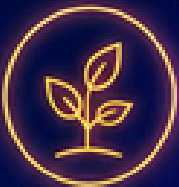
INNOVATION &
ENTREPRENEURSHIP



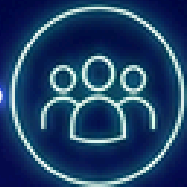
ARTIFICIAL
INTELLIGENCE



EDUCATION
WITHOUT LIMITS



SUSTAINABLE
FUTURE



EMPOWERING
GENERATIONS



THE COMMUNIQUE

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