



**CHRIST**

(DEEMED TO BE UNIVERSITY)

PUNE LAVASA CAMPUS  
The Hub of Analytics

**TQCEBT 2024 | IEEE Conference Inaugural |**  
**EVENT REPORT-2024**

EVENT INFORMATION	
Department	SCHOOL OF BUSINESS AND MANAGEMENT (BBA)
Location	CHRIST (Deemed to be University), Pune Lavasa Campus - 'The Hub of Analytics'
Event Title	TQCEBT 2024   IEEE Conference Inaugural
No of Activities	
Date and Time	21 <sup>st</sup> - 22 <sup>nd</sup> MARCH , 09:00 AM - 05:00 PM
Venue	CENTRAL BLOCK, AUDITORIUM
Academic Year	2023-24
Event Type (Focus)	IEEE Conference Inaugural
Blog Link	N/A
PARTICIPANTS INFORMATION	
Target Audience	Students from BBA, MBA, MSC DEPARTMENT
Details of any External Agencies, Speakers, Guests with Affiliation	Delegates Day 1 Dr. A.W. Santhosh Kumar Dr. Shubhasheesh Bhattacharya Dr. Archana Srivastava Mr. Chintan oza Ms. Aditi Vaidya Dr. Shravani Shahapure Mr. Jitesh Lalwani Mr. Prashant Joshi  Delegates Day 2 Dr. Parag kalkar Dr. Amar Buchade Prof. Amlan Chakrabarti Dr. Neha Sharma

	Dr. Mandar Pande Col. A.k.Nath Mr. Amit Saxena Prof. Sree Ganesh Thottempudi Dr. Sherimon PC
Website/ <b>Contact</b> of External Members	<b>NIL</b>
Organizing Committee Details	Dr. Lija Jacob, CHRIST (Deemed to be University), Pune Lavasa Campus, Chair (Advisory Committee) Anshul Saxena, CHRIST (Deemed to be University), Pune Lavasa Campus, Chair (Technical Team) Dr. Vandana Vijay Bhagat, Member IEEE, Chair (Publication Committee) Prof Sharad Gupta, CHRIST (Deemed to be University), Pune Lavasa Campus, Chair (Organizing Committee) Dr. Resham Lohani , CHRIST (Deemed to be University), Pune Lavasa Campus, TPC Chair Prof Pritty Jain , CHRIST (Deemed to be University), Pune Lavasa Campus, TPC Chair
No of Attendees/ Participants	<b>Students from BBA, MBA, MSC Department</b>

## SUMMARY OF THE OVERALL EVENT

The 2nd edition of the IEEE Conference on Trends in Quantum Computing and Emerging Business Technologies (TQCEBT 24), held on March 21-22, 2024, was a pivotal gathering of experts and researchers. This event provided a comprehensive overview of the current state of quantum technologies and their applications, challenges, and future directions. The conference highlighted significant advancements in quantum computing, artificial intelligence, blockchain, and other emerging technologies, emphasizing their transformative potential across various industries.

**\*Quantum Computing and Its Business Applications:\***

One of the central themes of the conference was the revolutionary potential of quantum computing. Quantum computing leverages the principles of quantum mechanics to perform complex computations at unprecedented speeds, far surpassing the capabilities of classical computers. This transformative technology holds promise for a wide range of business applications, offering solutions to problems that are currently intractable with classical computing.

**\*Optimization and Logistics:\***

Quantum computing excels in solving optimization problems, which are critical in various industries such as logistics, manufacturing, and finance. For instance, quantum algorithms can optimize supply chain management by finding the most efficient routes and schedules, reducing costs, and improving delivery times. This capability can lead to significant gains in operational efficiency and cost savings for businesses.

**\*Financial Modeling and Risk Analysis:\***

In the financial sector, quantum computing can enhance financial modeling and risk analysis. Complex calculations involved in portfolio optimization, pricing of financial derivatives, and risk assessment can be performed more accurately and quickly with quantum computers. This can lead to better decision-making, improved risk management, and increased profitability.

**\*Drug Discovery and Material Science:\***

Quantum computing has the potential to revolutionize drug discovery and material science by enabling the simulation of molecular and chemical interactions at a quantum level. This can accelerate the development of new drugs and materials, reducing the time and cost associated with research and development. Pharmaceutical companies and materials science firms can benefit greatly from these advancements.

#### \*Cryptography and Cybersecurity:\*

Quantum computing also poses both opportunities and challenges in the field of cryptography and cybersecurity. While quantum computers can break many of the cryptographic codes currently used to secure data, they also pave the way for the development of quantum-resistant encryption methods. Businesses must stay ahead of these developments to protect sensitive information and ensure data security in a post-quantum world.

#### \*Machine Learning and Artificial Intelligence:\*

Quantum computing can significantly enhance machine learning and artificial intelligence (AI) by processing large datasets more efficiently and identifying patterns that are difficult for classical computers to detect. This can lead to more accurate predictions, improved AI models, and innovative applications in fields such as healthcare, finance, and marketing.

#### \*Challenges and Future Directions:\*

Despite its immense potential, quantum computing faces several challenges that must be addressed before it can achieve widespread adoption. These include issues related to qubit stability, error correction, and the development of scalable quantum hardware. The conference highlighted ongoing research efforts aimed at overcoming these challenges and advancing the field of quantum computing.

The future of quantum computing holds immense promise for various industries, with potential applications that could drive innovation and transform business operations. Hybrid quantum-classical high-performance computing (HPC) systems were recognized as pivotal in addressing next-generation computing challenges, offering improved performance and capabilities for complex simulations and machine learning tasks.

#### \*Workforce Preparation and Education:\*

The conference underscored the importance of preparing the workforce for the future of quantum technology through higher education and lifelong learning initiatives. Institutions were encouraged to offer courses in quantum computing to equip students with the necessary skills and knowledge. Lifelong learning opportunities were deemed essential for professionals to stay updated on the latest developments in quantum computing and related fields, fostering continuous innovation and growth.

**\*Conclusion:\***

The IEEE TQCEBT 24 conference served as a platform for interdisciplinary collaboration and knowledge exchange, highlighting the transformative potential of quantum computing. As research and development in this field progress, quantum computing is poised to reshape industries, enhance cybersecurity, and drive innovation. The insights shared and discussions held during the conference underscored the importance of embracing quantum technologies to meet the evolving demands of a digital era, paving the way for a more secure, efficient, and interconnected future

## **OUTCOMES OF THE EVENT**

The conference on advancements in quantum communication and high-performance computing yielded significant outcomes that underscored the transformative potential of quantum technologies. Participants emphasized the critical role of quantum communication in ensuring secure communication, particularly in sensitive sectors like finance, healthcare, and business. The event highlighted emerging technologies such as quantum encryption, quantum key distribution, and quantum sensors, showcasing their diverse applications in environmental monitoring, healthcare diagnostics, and data protection. Discussions also addressed challenges in implementing quantum communication, including the need for advanced infrastructure and ongoing research into long-term stability. Moreover, the conference emphasized the importance of education and lifelong learning initiatives to prepare the workforce for the future of technology. Looking ahead, the outcomes of the conference signal a promising trajectory for quantum technologies, with implications for industries, cybersecurity, and innovation in the digital era.

**SUGGESTIONS FOR IMPROVEMENT • FEEDBACK FROM IQAC**

*(This page must be at the end of the report, after all the attachments mentioned in the next page. The observations could be made by Department Level IQAC based on the feedback received from various attendees. Furthermore, various strategies could be suggested for better organization of the upcoming events)*

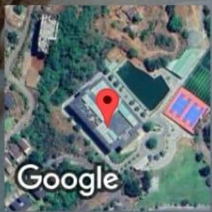
Date: 21<sup>st</sup>-22<sup>nd</sup> March, 2024

## Glimpse of the Event

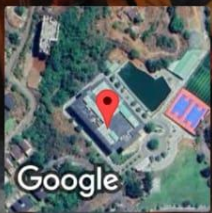








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