ORGANIZING COMMITTEE

CHIEF PATRONS
- ❑ **Smt. Neelayyagari Padma, Chairperson CBES.**
- ❑ **Sri. J Pratap Reddy, Secretary, CBES.**

PATRONS
- ❑ **Prof. G ChandraMohan Reddy, Principal, MGIT.**
- ❑ **Prof. K Sudhakar Reddy, Vice Principal & HoD MEC, MGIT.**

CONVENOR
- ❑ **Prof. D. Vijaya Lakshmi, Head, Dept. of IT, MGIT.**

COORDINATOR
- ❑ **Prof. M. Rudra Kumar, Professor, Dept. of IT, MGIT.**
- ❑ **Dr. Ch. Prem Kumar, Assoc. Professor, Dept. of IT, MGIT.**
- ❑ **Mr. Bapanapalli Lokesh, Asst. Professor, Dept. of IT, MGIT.**

ORGANIZING COMMITTEE MEMBERS
- ❑ **Mr. B. Tulasi Dasu, Asst. Professor, Dept. of IT.**
- ❑ **Ms. A Amulya, Asst. Professor, Dept. of IT.**

MAHATMA GANDHI
INSTITUTE OF TECHNOLOGY (Autonomous)
Kokapet(Village), Gandipet, Hyderabad, Telangana – 500075.   www.mgit.ac.in
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MOTIVATE
INNOVATE **28**
EMPOWER YEARS

One-Day Workshop

On

Exploring Quantum Computing: Concepts, Algorithms, and Real-World Applications

21st April 2025
Timing: 9:15 AM to 4:30 PM

Organized by
Department of Information Technology

👨‍🏫 **Resource Person**

Dr. S. Kranthi Kumar
Associate Professor, Department of CSE
Symbiosis Institute of Technology, Hyderabad Campus
Symbiosis International (Deemed University), Pune, India.

ADDRESS FOR CORRESPONDENCE

MAHATMA GANDHI INSTITUTE OF TECHNOLOGY

(Estd in 1997)

CHAITANYA BHARATHI EDUCATIONAL SOCIETY Permanently affiliated to JNTUH & Eight UG Programs Accredited by NBA; Accredited by NAAC with 'A++' GradeGandipet, Hyderabad – 500075
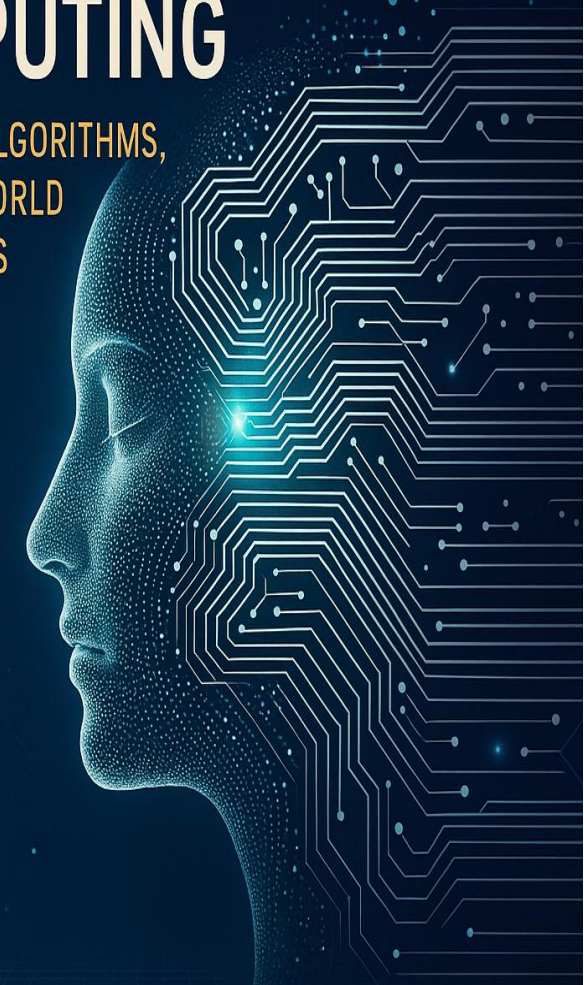
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EXPLORING QUANTUM COMPUTING

CONCEPTS, ALGORITHMS, AND REAL-WORLD APPLICATIONS

ABOUT THE INSTITUTE

❑Mahatma Gandhi Institute of Technology (MGIT) has experienced rapid growth since its establishment in 1997 by the Chaitanya Bharathi Educational Society (CBES) in the serene and tranquil surroundings of Gandipet, Hyderabad. The institute is accredited by NAAC with A++ grade for a period of 5 years w.e.f 23rd Nov 2023. MGIT has obtained academic Autonomous status by UGC for 10 years from the academic year 2021-22 and all the Departments of the Institute have been accredited by NBA, New Delhi. The Institute has been consistently ranked among the top 10 Engineering Colleges in Telangana State. In its two decades and more of its evolution, all the stake holders of the Institute, relentlessly endeavoured to position MGIT as a Leader and an Innovator in the ecosystem of technical education. The Institute has established excellent Infrastructure such as state-of-the art laboratories, spacious library with a collection of printed and digital books & journals, sports & hostel facilities along with Infrastructure for extra and co-curricular engagements, in pursuit of academic excellence. MGIT has scaled greater heights both Nationally & Internationally and made its mark in Industry and in academia.

ABOUT THE DEPARTMENT

❑The Department of Information Technology at MGIT was established in 1997 with an annual intake of 60 students. It has 21 qualified faculty members, including two Professors, two Associate Professor, and seventeen Assistant Professors, supported by experienced non-teaching staff. Currently, the department has six Ph.D. holders and ten faculty members pursuing their Ph.D.

❑The department boasts well-equipped independent laboratories, providing facilities for students to learn emerging technologies such as Data Analytics, Data Mining, IoT, AI, Machine Learning, and Open-Source Technologies. Faculty members are engaged in AICTE-sanctioned research projects. Students participate in various clubs and professional chapters like ASME, ISTE, IEEE, and the Innovation Club, showcasing their skills through product development and organizing workshops, seminars, and conferences. Our graduates are highly sought after by employers due to our hands-on curriculum, excellent labs, and strong industry connections.

PROGRAM OBJECTIVES:

❑ To introduce students to the fundamental principles of quantum computing, including qubits, superposition, and entanglement.
❑ To explore key quantum algorithms and understand their significance compared to classical algorithms.
❑ To provide hands-on experience with quantum programming tools such as Qiskit for simulating simple quantum circuits.

PROGRAM OUTCOMES:

Program Outcomes By the end of the program, participants will be able to:
❑ Students gained a foundational understanding of quantum computing concepts and how they differ from classical approaches.
❑ Students were able to interpret and simulate basic quantum algorithms using quantum programming platforms.
❑ Students developed an awareness of real-world applications of quantum computing and expressed interest in further learning.