ELIGIBILITY

- UG/PG Students
- Research Scholars/Faculty
- Industry Experts

REGISTRATION DETAILS

Registration for the workshop must be made online to the following bank account.

Bank Account No: 1481267367

Name of Account Holder: PSG Center for Nonformal and Continuing Education

IFSC code: CBIN0280913

Bank Name: Central bank of India

REGISTRATION FEE

(Inclusive of GST)

Students/ Research scholars	1000 INR
Faculty	1500 INR
Industry Experts	2000 INR

UG/PG students must submit bonafide certificate from the Head of department of their respective institution

ABOUT THE WORKSHOP

The workshop is aimed to bring together Quantum Circuit experts, professionals, researchers and students from across our region to explore the recent advancements in Quantum Circuits. This immersive program to be organized during 15th and 16th March 2025 offers a unique blend of lectures, hands-on training and interactive sessions, creating a dynamic environment for learning, networking, and collaboration.

Quantum Circuits workshop provides the perfect platform for the student's eagerness to deepen their knowledge, the professionals to build skills, and the industry experts seeking to engage with cutting-edge research. Participants will have the opportunity to interact with Quantum experts, engage in cross-disciplinary discussions and gain insights into the future of Quantum Computing.

CONTENT OF THE WORKSHOP

Day 1
- Introduction to Quantum Theory
- Quantum Information and Computation
- Basic of Quantum gates
- **Lab 1:** Invoking the environment for QISKIT Platform
- **Lab 2:** QISKIT Implementation of Quantum Gates

Day 2
- Quantum Algorithms
- Quantum Error Correction
- **Lab 3:** QISKIT Implementation of Quantum circuits
- **Lab 4:** QISKIT Implementation of Quantum Algorithms

PSG COLLEGE OF TECHNOLOGY
COIMBATORE

TWO DAYS WORKSHOP ON QUANTUM CIRCUITS

15th – 16th March 2025

ORGANIZED BY

Department of Electronics and Communication Engineering, PSG College of Technology, Coimbatore – 641004, Tamil Nadu

ABOUT THE COLLEGE

PSG College of Technology is a Govt. Aided, Autonomous, Affiliated to Anna University and ISO 9001:2015 certified Institution. The programmes of the college are recognized all over India and abroad. The college maintains close interaction with several R&D Institutions and institutions of higher learning in India and abroad, through institutional network programmes and collaborative research programmes. It also has close collaborative links with industries in the fields of Automotive, Aerospace, Defense, Textile, Machine Tools, Software Development and Consumer durables. The college has been the recipient of several prestigious projects and International funding support. PSG College of Technology believes in creating and disseminating knowledge and skills in core and frontier disciplines through innovative educational programs, industrial training, research and consultancy and developing a new cadre of professionals with a high level of competence, deep sense of social commitment and ethics.

ABOUT THE ECE DEPARTMENT

The Department of Electronics and Communication Engineering came in to existence in the year 1968. Ever since its inception, it has been splendid in providing dynamic and quality engineers to the society till date. The department has Undergraduate Programme in Electronics and Communication Engineering and Post Graduate Programmes in VLSI Design and Nanoscience and Technology offering high class technical experience to the students. B.E. ECE program is accredited for 6 years from 2024 to 2030 and M.E. VLSI Design programme is accredited for 3 years from 2022 to 2025 by the National Board of Accreditation. These accreditations reflect the department's commitment to maintaining high educational standards. Our unique feature is to provide state of art facilities in collaboration with leading industries like Texas Instruments, Keysight Technologies, Freescale, Caterpillar and Intel. The department has bagged the name for the institution by receiving the AICTE- CII award for the best industry linked institute for the ECE programme - 2013. The department is involved in several projects sponsored by MEITY, DST, DRDO, UGC, AICTE etc.

RESOURCE PERSONS

Dr. Amuda R, Professor, Dept. of Physics, PSGCT
Dr. R. Amuda, a Spintronics researcher with 27 years of teaching experience, has guided 5 PhD students, led 4 funded projects, and organised prestigious National Science Academy sponsored workshop and a winter school on Nonlinear Dynamics sponsored by DST- SERB.

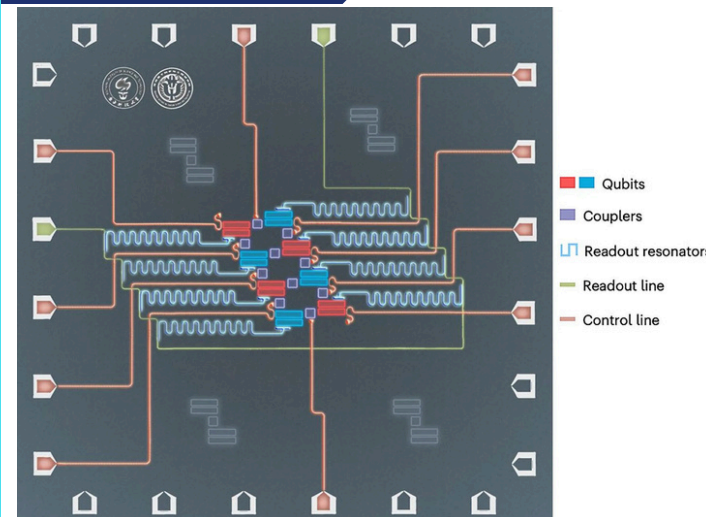**Dr. Manjula Gandhi S, Associate Professor, Dept. of Computing, CIT**
Dr. Manjula Gandhi S, an IBM Qiskit Advocate, Quantum Educator, and Certified Developer, has been engaged in Quantum Computing since 2003. Her research covers reversible circuits, quantum query complexity, quantum machine learning, and quantum image processing. She mentors in the Qiskit Advocate Mentorship Program and leads the Tamil translation of the Qiskit textbook. An invited guest for Qiskit India Week of Quantum, she is skilled in IBM Qiskit, Classiq, Microsoft Q#, Xanadu Pennylane, and QSim. Teaching Quantum Computing at CIT for four years, she has delivered lectures across India.

Dr. K. Rajalakshmi, Associate Professor, Dept. of ECE, PSGCT
Dr. K. Rajalakshmi, an IEEE Senior Member with 27 years of teaching, researches Quantum Computation, Hardware Security and Accelerators. She has delivered AICTE-sponsored lectures and organized National and International workshops and FDPs.

Ms. Janani A, Quantum Engineer, IBM Research, Bengaluru
Ms. Janani A, a Quantum Engineer with 3 years of research experience, specializes in quantum computation. An IISER Pune graduate and she excels in quantum algorithms and industry applications, recipient of DST-Inspire Fellowship awarded by the Govt. of India for top 1% of high school students in the country pursuing STEM.

Qubits
Couplers
Readout resonator
Readout line
Control line

CONVENOR
Dr V Krishnaveni,
Professor and Head, ECE

COORDINATORS
1. Dr K Rajalakshmi,
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2. Mrs J Deepika, Assistant Professor, ECE
E-Mail: jdk.ece@psgtech.ac.in
Contact: 9894656054

IMPORTANT DATES TO REMEMBER
Last date for registration: **08/03/2025**

REGISTRATION LINK AND QR CODE

https://forms.gle/z6M4fMeVqKpGZVhM8

Contact Details
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