

Speakers



Dr. Anupama Ray

Senior Research Scientist & Technical
Lead - Quantum + AI
IBM Research India

Session Title: **Towards Quantum Advantage**

This session will explore the progress in quantum computing research and the challenges involved in achieving practical quantum advantage. The talk will discuss recent advancements in quantum hardware, algorithms, and the integration of quantum computing with AI.



Ms. Janani Ananthanarayanan

Quantum Engineer,
IBM

Session Title: **Practical exposure with Qiskit 101**

This session introduces participants to Qiskit, covering the basics of quantum programming, circuit creation, and execution of quantum algorithms on simulators and real quantum hardware available through the IBM Quantum platform.



Dr. Binayak Dutta

Assistant Professor,
Christ University

Session Title : **Foundational Overview**

This introductory talk examines quantum advantage through the lens of computational complexity theory. Discussion on the principles of quantum computation, key algorithms such as Grover's, and the complexity class BQP. The talk also explores experimental demonstrations of quantum advantage and the open theoretical questions shaping the future of quantum computing.

Organizers



Dr. Rupali Sunil Wagh
Head, Dept of Computer Science

Dr. Mithun Thudiyangal
Founding Coordinator, CQTCS

Dr. Somnath Sinha
Associate Professor, Dept. of Computer
Science

Dr. Binayak Dutta
Assistant Professor, Dept. of Computer
Science

Dr. Sreeja C S
Group Leader, CQTCS

Workshop Schedule



09:00 AM - 09:30 AM	Inauguration & Welcome
09:30 AM - 10:30 AM	Session I: Foundations
10:30 AM - 10:45 AM	Tea Break (Morning)
10:45 AM - 12:45 PM	Session II: Deep Dive
12:45 PM - 01:45 PM	Lunch Break
01:45 PM - 03:00 PM	Session III (Part A): Strategy
03:00 PM - 03:15 PM	Tea Break (Afternoon)
03:15 PM - 03:30 PM	Session III (Part B): Implementation
03:30 PM - 04:00 PM	Q&A, Feedback & Closing

For More Details Contact

B Dutta
6290604342

S Sinha
9717620165



DEPARTMENT OF COMPUTER SCIENCE
&
CENTRE FOR QUANTUM TECHNOLOGIES AND
COMPLEX SYSTEMS

JOINTLY PRESENTS
One-Day Workshop

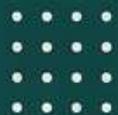
Unlocking Quantum Potential with Qiskit

Quantum explore series



BENGALURU CENTRAL CAMPUS

8th APRIL
2026



About CHRIST (Deemed to be University)

CHRIST (Deemed to be University), founded on the vision of Kuriakose Elias Chavara, began as Christ College in 1989 and is administered by the Carmelites of Mory Immaculate. Recognized by University Grants Commission and accredited 'A+' by National Assessment and Accreditation Council, the multidisciplinary university offers diverse programs to 30,000+ students across multiple campuses.

About Center for Quantum Technologies and Complex Systems (CQTCS)

CQTCS aims to establish on International level world-leading research centre dedicated to advancing foundational and applied research in quantum science, engineering, and complex systems dynamics. This centre will train the next generation of physicists and interdisciplinary researchers, and provide support for innovation in quantum technologies and complex systems. Additionally, this centre will foster international collaborations and partnerships. The Centre for Quantum Technologies and Complex Systems (CQTCS) was established under the school of sciences as an academic research centre. The centre was formally inaugurated by Dr Subir Sachdev, Herschel Smith professor of Physics at Harvard University, USA on 19th December 2025.

About Computer Science Department

Established in 1990, the Department offers industry-aligned curricula, strong research focus, and opportunities for collaboration with industry and international universities. With expert faculty and active alumni support, it provides undergraduate, postgraduate, and doctoral programmes in Computer Science, Artificial Intelligence, Machine Learning, Computer Applications, and related interdisciplinary fields.

About the Workshop

This one-day workshop aims to introduce participants to the rapidly evolving field of Quantum Computing and provide insights into the journey toward achieving Quantum Advantage. The workshop will cover foundational concepts, emerging quantum algorithms, and practical development using Qiskit, the open-source quantum computing framework developed by IBM. Participants will gain an understanding of how quantum algorithms are designed and how quantum programs can be implemented using modern quantum software tools.

Workshop Highlights

- Introduction to Quantum Computing
- Understanding Quantum Advantage
- Overview of quantum algorithms
- Hands-on introduction to Qiskit
- Demonstration of quantum circuits and simulations
- Interaction with experts from IBM Research India

Registration fee : **₹1500/₹1000/₹750**
(Faculty/Research Scholar/Student)

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Registration QR code

