

WORKSHOP THEMES

- Fundamentals of Quantum Computation
- Classical versus Quantum Computation
- Qubits and Quantum States
- Superposition and Quantum Entanglement
- Quantum Gates and Quantum Circuits
- Quantum Computational Complexity
- Deutsch-Jozsa Algorithm
- Grover's Search Algorithm
- Shor's Factoring Algorithm
- Quantum Programming using Qiskit
- Quantum Programming using Cirq
- Quantum Circuit Simulation
- Mathematical Foundations of Quantum Computing
- Quantum Information Processing
- Emerging Quantum Technologies
- Applications of Quantum Computing

WORKSHOP HIGHLIGHTS

- Five-Day Intensive Programme
- Expert Lectures & Hands-on Training
- Quantum Algorithms & Circuit Design
- Qiskit/Cirq-Based Simulations
- Emerging Quantum Technologies
- Certificate of Participation
- Research & Networking Opportunities

Important Dates
Registration Opens : 15/08/2026
Last date of registration(Early Bird): 15/10/2026
Last date for registration: 15/11/2026
Registration Link: <https://forms.gle/vMXVTxvCahcC9hhE7>

Registration fee

Category	Physical Mode	Early Bird Discount
Indian Academician/ Industry Delegates	₹ 7000	₹ 6500
Indian Students	₹ 4000	₹ 3500
SMIT Students	₹ 1000	₹ 800



Payment Link:
<https://sbcollect.sbi.bank.in/sbcollect/icollecthome.htm>

Steps: Please click the link and make the following selections:
Choose Sikkim Manipal Institute of Technology as the institution, Sikkim as the state, and Workshop QCMA 2027 under the category.
Please complete the payment and retain the receipt.

OBJECTIVES OF QCMA-2027

QCMA-2027 a five-day national workshop aims to bring together academicians, researchers, industry professionals, and students to exchange ideas and explore recent advances in Quantum Science, Quantum Computing and Mathematical Applications. The workshop provides an interdisciplinary platform for learning the mathematical foundations, quantum algorithms, programming frameworks, and emerging quantum technologies through expert lectures and hands-on sessions. It also encourages research collaboration, innovation and the application of quantum computing across mathematics, computer science, physics, engineering and related disciplines.

About Sikkim Manipal Institute of Technology (SMIT) and Sikkim Manipal University (SMU)

Sikkim Manipal Institute of Technology (SMIT), a constituent college of Sikkim Manipal University (SMU), is one of the leading centres of higher education and research in North-East India. Accredited with NAAC A+, the institute is recognized for excellence in teaching, innovation and research. Established in 1997, SMIT offers a wide range of undergraduate, postgraduate and doctoral programmes in science, engineering and management. The institute provides a vibrant academic environment supported by experienced faculty members, modern laboratories and active research groups. Faculty members are engaged in research projects funded by national agencies such as DST, DRDO, AICTE and other prestigious organizations. SMIT regularly organizes conferences, workshops, seminars and faculty development programmes that promote interdisciplinary research and academic excellence.

About Dept. of Mathematics, SMIT

Established in 1997, the Department of Mathematics has been actively contributing to teaching and research activities at SMIT. The department offers B.Sc., M.Sc. and Ph.D. programmes and is supported by dedicated faculty members and active research scholars. The department has research expertise in Applied Mathematics, Nonlinear Dynamics, Mathematical Modelling, Fluid Dynamics, Computational Mathematics, Optimization, Data Analysis and other emerging interdisciplinary areas. The department regularly organizes conferences, workshops and seminars to promote academic excellence and collaborative research.

Contact us

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NATIONAL WORKSHOP ON QUANTUM SCIENCE, COMPUTING AND MATHEMATICAL APPLICATIONS

QCMA 2027

18-22 January 2027

Organized by
Department of Mathematics

**Sikkim Manipal Institute of
Technology (SMIT),
Sikkim Manipal University (SMU),
Majitar, Sikkim 737136, India**



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MANIPAL
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Sweta Tiwari
Yogesh Chettri

How to reach SMIT
Nearest Airport: Bagdogra, Siliguri, West Bengal, India
(<https://goo.gl/maps/tK4bXVP5mSCjeWRE8>)
Nearest Railway Station: New Jalpaiguri, West Bengal, India
(<https://goo.gl/maps/vpJqEQs8GHT3AEBj8>)
Nearest Bus Terminus: SNT, Siliguri, West Bengal, India
(<https://goo.gl/maps/H4NL7nSuHniamjnTA>)
For further assistance, please contact us at:
+91 7908414622/ +91 9932141564/ +91 9933946471

TARGET AUDIENCE

- Undergraduate Students
- Postgraduate Students
- Research Scholars
- Faculty Members
- Industry Professionals

PREREQUISITES

- Basic Linear Algebra
- Probability and Statistics
- Complex Analysis
- Differential Equations
- Basic Python Programming
- Basic Electromagnetic Theory

EXPECTED OUTCOMES

- Understanding of Fundamental Quantum Concepts
- Knowledge of Quantum Algorithms
- Ability to Design Quantum Circuits
- Practical Exposure to Qiskit and Cirq
- Familiarity with Quantum Computing Applications
- Foundation for Advanced Learning and Research

TA (AC 3-tier/AC Chair Car) may be provided to all participants for their travel to join QCMA 2027 through the shortest route (offline seats are limited). Make sure to get confirmation from the organizer before you book your tickets.

Resource persons:



Prof. Raju K. George
Outstanding Professor
Indian Institute of
Space Science and Technology
(IIST)



Prof. Rajendra K. Ray
Professor and Chairperson,
School of Mathematical and
Statistical Sciences(SMSS),
IIT Mandi, Himachal Pradesh



Dr. Ashok Kumar
Associate Professor
Indian Institute of
Space Science and Technology
(IIST)



Dr. Neel Kanth Kundu
Assistant Professor,
CARE, IIT Delhi

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