REGISTRATION FORM

5-Day DRDO Sponsored Workshop
on
"Cybersecurity and Quantum Cryptography"

(30th June - 04th July, 2025)

Name of the Participant: _____

Department: _____

Gender: _____

Pursuing Degree: MS/ M.Tech/ M.E / Ph.D.

Semester: _____

Qualification: _____

Organization: _____

Mobile No. _____

Email: _____

I agree to abide by the rules and the regulations governing the Workshop.

Place:
Date: *Signature of the Participant*

Mr./Ms._____ is a student/ faculty of our Institution and is permitted to attend the program.

_____

Signature of the Head of (applicant's) Institution and Seal

Place:
Date:

Accommodation: A limited number of rooms in NITK Guesthouses and Hostels are available on First Come and First Served basis. If unavailable, the participants need to make self-arrangements for their stay outside the NITK premise.

Venue: Dept. of Information Technology
NITK Surathkal
Mangalore- 575025.

Address for Communication

Dr. Bhawana Rudra & Dr. Sumedh Gaikwad

Department of Information Technology
National Institute of Technology, Karnataka
Surathkal, Mangalore – 575 025

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Contact:
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Course Contents

- Introduction to Cybersecurity and Classical Cryptography
- Introduction to Quantum Computing and Quantum Cryptography
- Quantum Cryptography-Security Challenges
- Applications of Quantum Cryptography
- Future Trends and Challenges in Security

5-Day DRDO Sponsored Workshop on
" Cybersecurity and Quantum Cryptography "
(30th June – 04th July, 2025)

COORDINATOR
Dr. Bhawana Rudra
Dept. of Information Technology, NITK

CO-COORDINATOR
Dr. Shashidhar Koolagudi
Dept. of Computer Science & Engg., NITK

Organized By

Department of Information Technology
National Institute of Technology, Karnataka
Surathkal, Mangalore – 575 025

About NITK Surathkal

NITK Surathkal is a premier institution engaged in imparting quality technological education and a broad range of research, development and consultancy activities. NITK has carved a niche for itself among the best technical institutes in India and is consistently ranked among the top 10 technological institutes.

Department of Information Technology

Department of Information Technology was established in June 2000, The department offers undergraduate course B.Tech. in Information Technology, Post Graduate course M.Tech. in Information Technology, M.Tech. by (Research) and Doctoral Program (Ph.D) Current research activities of the department include Data Mining, Web services, Distributed Computing, Semantic Web Technology, Natural language Processing, Software Aging, Virtualization, Soft Computing, Wireless Sensor Networks, Computer Networks, Network and Cyber Security, Information Security, Internet of Things (IoT), Affective Computing, Big Data Analytics, Cloud/Edge/Fog Computing, Cloud Security, Databases, Healthcare Informatics, High Performance Computing, Information Retrieval, Social Multimedia/Social Network Analysis, Software Engineering, Blockchain Technologies, Future Internet Architecture, Mobile Software Engineering, Deep Learning Applications, Quantum Computing & Quantum Cryptography and Post Quantum Cryptography.

How to Reach NITK Surathkal

NITK is located in Surathkal on the scenic shores of the Arabian Sea, about 20km north of the city of Mangalore and is well connected by Air, Rail and Road. The nearest domestic/international airport is situated at Bajpe (about 10km from Mangalore) and the nearest railway station is Surathkal (3 km). The NITK Campus is situated right on National Highway NH66 with very good bus connectivity from Mangalore, Udupi etc.

About the Program

The rapid advancement of digital technologies and the increasing reliance on the Internet have led to a surge in cyber threats. From personal data breaches to large-scale attacks on IT infrastructures, there is a need for robust cybersecurity solutions which has never been greater. Traditional cryptographic methods face significant challenges with the emergence of quantum computing, which has the potential to break conventional encryption schemes. To address these concerns, researchers are exploring cutting-edge technologies such as Quantum Cryptography and Post-Quantum Cryptographic Algorithms.

Quantum Cryptography leverages the principles of quantum mechanics to create secure communication channels resistant to attacks. Quantum Key Distribution (QKD) protocols enable provably secure key exchange, making it an essential component of next-generation cybersecurity. On the other hand, Post-Quantum Cryptography focuses on designing encryption techniques that remain secure even in the presence of quantum adversaries. These advancements are crucial for ensuring long-term data security in banking, defense, healthcare, and other critical sectors.

This workshop will provide a comprehensive understanding of cybersecurity threats, classical and quantum cryptography, and emerging post-quantum solutions. Participants will explore how quantum computing impacts security, the practical implementation of quantum-safe encryption, and real-world applications of quantum cryptographic systems. Through expert-led sessions, hands-on practicals, and discussions on future challenges, attendees will gain insights into the evolving landscape of cybersecurity and the role of quantum technologies in securing the digital world.

Objective of the Program

This program integrates both theoretical foundations and hands-on sessions in Cybersecurity and Quantum Cryptography. It is designed to cover essential concepts, practical implementations, and research-oriented discussions. Participants will gain insights into classical and quantum cryptographic techniques, explore real-world security challenges, and engage in interactive sessions demonstrating quantum-safe encryption and secure communication protocols.

Course Deliverables:

This program will equip participants with a deep understanding of various methodologies, techniques, and tools related to Cybersecurity, Classical Cryptography, and Quantum Cryptography. It will cover fundamental principles, practical implementations, and emerging security challenges in the quantum era.

Resource Persons

Experts from Industry, Academia, R&D Organizations will deliver expert talks to make participants aware of the importance of Security in various domains of Quantum Cryptography along with various applications and Research Challenges with Practical Sessions.

General Information

- Eligibility: The programme is open to faculty, PG and Ph.D Students of UGC/ AICTE approved Engineering and Technology Colleges.
- Maximum Number of Participants: 30 (Selection on the basis of first come first serve)
- Registration Fee: NO Registration Fee
- Deadline: Completed applications should reach the Coordinator on or before 10th June 2025.

Finally, enter the details in the form shared below. Make sure to have the following documents ready, filled and duly signed application form in scanned format separate, for uploading (<10 MB each). Make sure to rename the file to your name along with approval from Organization & College ID.

Form Link:
https://forms.gle/EaHfBWWiUMAJBiCz6

Important Dates

Last Date for Receipt of Applications:

10th June, 2025

Intimation of Selection by email:

15st June, 2025