Online STTP on "Quantum Computing and its Applications: A Modern Approaches and Practices"

From 27th Feb – 3rd March 2023

REGISTRATION FORM

Name: …………………………………………

Designation: ……………..………………

Organization: ………………………………

Qualification: ………………………………

Correspondence Address: ………….……

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Tel. (O) ………………. (R) …………........

   (M) ………………………………….......

E-Mail: …………………….………………

Amount …………...................................

DD/NEFT/RTGS No..............................

Date …………………

Bank Details ……………………..………

Accommodation Required: Yes / No

Date: Place:

Signature of candidate……………………..

Note:

DD/NEFT/RTGS should be made in favor of Director, National Institute of Technology Raipur, payable at Raipur (CG), SBI bank, GCET Raipur branch.

For online Registration go through the following link:

https://forms.gle/2GihMNXD3aBZvHF6A

Payment should be made to the following

Account No.: 38027633250

Name: Director, NIT Raipur

IFSC: SBIN0002852

Photocopies of registration form may be used.

Chief Patron

Prof. Dr. (Mrs.) A. B. Soni, Director, NIT, Raipur

Patron

**Dr. Prabhat Diwan
Dean (R & C), NIT Raipur**

Chairman

**Dr. Rakesh Tripathi,
HoD,
Department of Information Technology**

Coordinators

**Dr. Rakesh Tripathi
Dr. Chandrashekar Jatoth**

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**Organized by
Department of Information Technology**

**National Institute of Technology – Raipur
492 010 (Chhattisgarh)**

About the Institute

National Institute of Technology Raipur situated in the capital of Chhattisgarh, has proven to be "avant-grade' in the field of science and technology over past few decades in this region. With sweet memory of foundation ceremony by our president Hon'ble Dr. Rajendra Prasad on 14th September 1956. the institute started with two departments namely Metallurgical and Mining Engineering. Later the inauguration of the Institute building was done by our Prime Minister Hon'ble Pt. Jawahar Lal Nehru on 14th March 1963. From 1st December 2005, the institute has become the National Institute of Technology. It is well connected with Mumbai, Delhi and all metro cities by regular flights and is on the main Howrah-Mumbai railway route. The institute is 5 km from the Raipur railways station and 18 km from airport on NH-6, the Great Eastern Road.

About Department

The **Department of Information Technology** came into existence in year 2000. IT department is the study, research and work place of approximately 300 students from the 28 states across India. The department provides an outstanding research environment and offers academic program leading to the award of B.Tech., M.Tech., and Ph.D. degree.

Organizer:

Department of Information Technology
NIT Raipur (CG) – 492 010, INDIA

Theme and Objectives and Scope

Aim of this STTP is to provide up-gradation of knowledge and skills for students/research scholars/faculties/scientists involved in active research in the area of Quantum Computing and its Applications: Modern Approaches and Practices. The course will provide in depth exposure to them. The lectures will be delivered by distinguished experts from NIT and Software Industries. This one week STTP course will include lectures, special case studies in the areas of application of Quantum Computing and its Applications along with the hands-on experiments using distributed platform such as IBM Quantum Computing suite.

Topics to be covered:

- A Modern journey of quantum mechanics to quantum computing
- Quantum Information and Applications
- Quantum Computer and Quantum Algorithms
- Quantum Secure Cryptography
- IBM Qiskit, UI Tools and OpenQASM (Open Quantum Assembly Language)
- Quantum Programming Languages, Platforms and Frameworks
- Quantum Search, Quantum subroutines, Grover's Algorithm
- Quantum Fourier Transforms, Discrete logarithms, Shor's Algorithm, BB 84
- Quantum Cryptography & Key Distribution
- Quantum Machine Learning, Opportunities, Applications
- Quantum and Block chain applications.

Targeted Participants

Students, research scholars and faculties of Engineering and basic sciences of educational institutes and employees of industries.

Resource Persons:

Academicians from IITs, NITs, and Industry are invited to deliver the lectures and to share their research experience in the innovative field of Quantum Computing. Experts from industry also invited as speaker for this programme.

Selection:

Since the number of seats is limited to **100, the selection will be made on first cum first basis.** However, the preference will be given to the outside participants. Intimation regarding selection will be sent to the candidates by e-mail as per the scheduled date. E-Certificates will be issued to the participants only after attending the complete course.

Registration Fee Details (in INR)

Participants	Amount (in Rs)
UG/PG/PhD Students	708/- (including 18% GST)
Faculty and Industry Persons	Rs 1180/-(including 18% GST)

Application in the prescribed format with registration fee in the form of DD/NEFT/RTGS drawn in favor of "**Director, NIT Raipur**" must reach the coordinator on or before 20th February, 2023. Candidates have to send scanned copy of the registration form along with scanned of DD/NEFT/RTGS transaction. **Email address: jchandrashekar.it@nitrr.ac.in.** Selected candidate will be informed by email/phone as per the schedule. Certificates will be issued to the participants only after attending the complete course.

Important Dates:

Last Date of Registration: 20th February, 2023
Intimation of Acceptance: 23th February, 2023
Workshop Dates: 27th Feb– 3rd March 2023