CHIEF PATRON

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CHIEF ADVISOR

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COORDINATOR

Prof. P. RAJ REDDY
Head, Dept. of Mathematics

CO-COORDINATORS

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Asst. Professor, Dept. of Mathematics

R SRIKANTH
Asst. Professor, Department of CSE

ORGANIZING COMMITTEE

Dr M. GANESHWARA RAO, Professor
Dr SWATMARAM, Associate Professor
Dr. G. NARSIMULU, Asst. Professor (Sr)
Dr. B. R. SREEDHAR, Asst. Professor Sr)
Mr. M. AMARNATH, Asst. Professor
Dr. K. SHARADA, Asst. Professor
Dr A PADMA, Asst. Professor
Dr. MAMTA THAKUR, Asst. Professor
Dr. PALLE KIRAN, Asst. Professor

ELIGIBILITY

The Faculty Members of the AICTE approved institutions, research scholars, PG Scholars, participants from Government, Industry (Bureaucrats / Technicians/Participants from Industry etc.)

GUIDELINES

- o Eligible participants will be selected based on first come first serve basis and will be intimated by e-mail only.
- o On the last day of the program an assessment test will be conducted for all participants.
- o A Digital Certificate by the ATAL Academy will be issued to the participants, who have an attendance of minimum 80% and score more than 60% in the test.

REGISTRATION DETAILS

No Registration Fee

Link for the registration:

Participants are requested to register compulsorily in the following link.

https://www.aicte-india.org/atal

OR

https://atalacademy.aicte-india.org/login

After registration in the above link submit the scanned copy of the registration form to hod_maths@cbit.ac.in **on or before 12.01.2021.**

CHAITANYA BHARATHI
INSTITUTE OF TECHNOLOGY (A)
Kokapet(Village), Gandipet, Hyderabad, Telangana-500075. www.cbit.ac.in

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on

QUANTUM COMPUTING

18th – 22th January, 2021

Organized by

DEPARTMENT OF MATHEMATICS

CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY(A)

CBIT, established in the Year 1979, has developed in Four Decades of its journey, as one of the Premier Engineering Institute in INDIA, in Telangana State. The Institute offers Eleven UG and Eleven PG Programs into which Brilliant and Meritorious Candidates with good EAMCET Rank are seeking admissions at CBIT. CBIT Students are prepared and perfected holistically to secure Placements in reputed National and Multi-National Industries. Alumni, nearly 25,000 Graduate Engineers, are successfully placed in their Careers and as Entrepreneurs Globally. The Institute has been granted Autonomous Status from the Academic Year 2013-14 onwards.

ABOUT THE DEPARTMENT

The Department of Mathematics, currently has 12 faculty members who have vast research interest in different domains of their respective fields such as Fluid Mechanics, Number theory, Fixed Point Theory, Applied Regression Analysis, Numerical Methods, Reliability Theory and Operations Research, Graph Theory, Number theory, Decision making and Stochastic process

ABOUT THE FDP

The objective of ATAL scheme is "To plan and help in imparting quality technical education in the country and to support technical institutions in fostering research, innovation and entrepreneurship through training in various emerging fields"

The current FDP is highly interdisciplinary by nature, encompassing aspects of different Engineering fields like Materials science. It is known that traditional computer software is designed for serial computers, meaning that a particular process must be completed before another process is taken up. To some extent we are using parallel computer to solve a particular problem in same time with integrated results.

In a quantum computer the same processor performs operations on multiple inputs simultaneously (qubits and multiple qubits) and super position of different quantum states exists. The quantum computer offers the possibility of technology exponentially more powerful than current systems. The applications of quantum computing will benefit large section of society in the form of education, training, business as well as output of the industry requirements for the future generation socioeconomically and also industrial exposure in Quantum computing area to train the students in an innovative direction for the future generation.

TOPICS TO BE COVERED IN FDP

The topics include introductory concepts and advanced topics with practical demonstrations in the field of Blockchain. The following topics will be covered but are not limited to:

- o Introduction to Quantum Computing with background of quantum mechanics
- o Linear Algebra & Hilbert spaces
- o Quantum single/Multiple qubit gates
- o Bell State
- o Teleportation
- o Introduction to (QISKIT)
- o Quantum Fourier Transform
- o Introduction to Quantum Algorithm
- o Hands on session Simon algorithm
- o Quantum phase Estimation
- o Grover's algorithm
- o Shore's algorithm

RESOURCE PERSONS

Resource Persons will be from Renowned Institutions such as IIT's/NIT's, Industries and host Institution.

FOR ANY DETAILS PLEASE CONTACT

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