

Quantum Computing Explained: From Qubits to Quantum Algorithms

(Schedule of the workshop)

Topic	Speaker	Time	
		From	To
Day 1 (14th Dec 2024) Introduction to Quantum Computing			
Inauguration		10:00	10:15
Introduction	Shri Ch A S Murty <i>Scientist G, C-DAC Hyderabad & Director, C-DAC Kolkata</i>	10:15	10:30
Keynote speech	Prof. P. K. Panigrahi <i>Centre for Quantum Science and Technologies S `O' A University, Bhubaneswar</i>	10:30	11:30
<i>Tea break</i>		11:30	11:45
Introduction to Quantum Computing	Shri Tapas Saini <i>C-DAC Hyderabad</i>	11:45	12:30
Quantum Gates and Circuits	Dr. Gurmohan Singh <i>C-DAC Mohali</i>	12:30	13:15
<i>Lunch</i>		13:15	14:15
Qiskit Basics Quantum Single Qubit Gates	Shri Nagendra Singh <i>CDAC, CINE</i>	14:15	15:00
Introduction to QSim with hands on experience	Shri Vivek Nainwal <i>C-DAC Hyderabad</i>	15:00	16:00
	Shri Amit Saxena <i>C-DAC Pune</i>		
<i>Tea break</i>		16:00	16:15
Introduction to QML	Dr. Gurmohan Singh <i>C-DAC Mohali</i>	16:15	17:00
	Dr. Tarun Kumar		

Day 2 (15th Dec 2024) Advanced Quantum Computing - I

Quantum Simulators on FPGA	Shri Abhishek Tiwari <i>C-DAC Noida</i>	10:30	11:30
<i>Tea break</i>		11:30	11:45
Quantum Fourier transform: Computational domain	Shri Aniket Sinha <i>C-DAC Patna</i>	11:45	12:30
Quantum Arithmetic	Shri Rejeesh A. S. <i>C-DAC Patna</i>	12:30	13:30
<i>Lunch</i>		13:30	14:30
Regression using Variational Quantum Circuit	Dr. Subimal Deb <i>C-DAC Kolkata</i>	14:30	15:30
<i>Tea break</i>		15:30	15:45
Introduction to Qniverse: A universal quantum computing platform	Shri Henry Sukumar <i>C-DAC Bangalore</i>	15:45	16:45

Day 3 (16th Dec 2024) Advanced Quantum Computing - II

Scalable simulation of quantum circuits with Tensor networks.	Dr. Shreya Banerjee <i>Centre for Quantum Science and Technologies S `O' A University, Bhubaneswar</i>	10:30	11:15
<i>Tea break</i>		11:15	11:30
Quantum Algorithms: QPE	Prof. Amlan Chakraborti <i>University of Calcutta</i>	11:30	13:30
<i>Lunch</i>		13:30	14:30
Quantum Computing for Utility Experiments	Dr. Mostafizur Rahaman <i>IBM Quantum, IRL Bangalore</i>	14:30	15:30
Concluding Session		15:30	16:00