IITB Workshop on Quantum Science & Technology

Organized by the CoE-QuICST & the Office of Dean R&D, IIT Bombay in collaboration with CEFIPRA

February 17th (Friday) & 18th (Saturday), 2023   **Venue: B. Nag Auditorium, VMCC**

Day 1	
9:30 AM – 9:45 AM	Tea/Coffee and Networking
9:45 AM – 10:00 AM	Welcome Address and Workshop Agenda Speaker: Prof. Milind Atrey, Dean R&D - IIT Bombay
10:00 AM – 11:00 AM	**Keynote Address** Speaker: Prof. John Martinis, University of California [Online]
11:00 AM– 11:20 AM	**Introduction to CoE-QuICST** Speaker: Prof. Suddhasatta Mahapatra, IIT Bombay, PIC CoE-QuICST
11:20 AM– 11:50 AM	Quantum Computing, Simulation and Machine Learning: Colloquium Speaker: Prof. Sai Vinjanampathy, IIT Bombay
11:55 AM – 12:10 PM	Tea/Coffee Break with Poster Session
12:15 PM – 1:00 PM	**Plenary Talk: Landscape of Quantum Science and Technology** Speaker: Dr. K. VijayRaghavan, Ex-Principal Scientific Advisor, GoI
1:00 PM – 2:00 PM	Lunch
2:00 PM – 2:30 PM	Quantum Communication: Colloquium Speaker: Prof. Siddhartha Santra, IIT Bombay
2:30 PM – 3:00 PM	Quantum Sensing: Colloquium Speaker: Prof. Kasturi Saha, IIT Bombay
3:00 PM – 4:30 PM	**Panel Discussion: Quantum Technology - Now and Future** Dr. K. VijayRaghavan, Ex-Principal Scientific Advisor, Govt. of India. Shri. Abdul Kayum, DDG (6G Technologies), DoT Mr. Anil Sharma, Tata Consultancy Services Dr. Nagendra Nagaraja, QPiAI Prof. A. Ghosh, IISc Prof. R. Vijayraghavan, TIFR
4:30 PM – 4:50 PM	Tea/Coffee Break with Poster Session

4:50 PM – 5:00 PM	Introduction of Prof. Serge Haroche by Prof. Subhasis Chaudhuri, Director, IITB
5:00 PM – 6:00 PM	Quantum Science with Rydberg Atoms **Distinguished Institute Speaker** Prof. Serge Haroche, Nobel Laureate in Physics 2012
6:00 PM – 6:15 PM	High Tea

Day 2	
9:45 AM – 10:00 AM	Tea/Coffee and Networking
10:00 AM – 10:25 AM	Post-Quantum and Quantum Cryptography: An Overview Speaker: Prof. Manoj Prabhakaran, IIT Bombay
10:25 AM – 10:50 AM	The Quantum Advantage in Decentralized Control Speaker: Prof. Ankur Kulkarni, IIT Bombay
10:50 AM – 11:15 AM	Tea/Coffee Break with Poster Session
11:15 AM – 11:40 PM	Quantum Information Processing using Hybrid Quantum Systems Speaker: Prof. Himadri Dhar, IIT Bombay
11:40 PM – 12:05 PM	Quantum Materials: Colloquium Speaker: Prof. Bhaskaran Muralidharan, IIT Bombay
12:05 PM – 12:30 PM	Spintronics with Superconductors Speaker: Prof. Avradeep Pal, IIT Bombay
12:30 PM – 1:30 PM	Lunch
1:30 PM – 1:55 PM	Quantum Biomimetic Electronic Nose and Electronic Tongue Sensor Speaker: Prof. Swaroop Ganguly, IIT Bombay
1:55 PM – 2:25 PM	Achieving acceleration in Machine Learning through Quantum Computing Speaker: Prof. Debanjan Bhowmik, IIT Bombay
2:30 PM – 3:30 PM	**Plenary Talk: Testing Quantum Nature of Gravity** Speaker: Prof. Sougato Bose, University College London [Online]
3.30 PM - 3.45 PM	Vote of thanks by Prof. Upendra Bhandarkar, Associate Dean R&D, IITB
3:40 PM – 4:00 PM	Tea/Coffee Break