# International Symposium on Quantum Computing and Innovations
# (ISQCI 2024)

Date: 17th -18th December 2024

Venue: STPI, Kolkata

## Program Agenda

| Day 1: December 17, 2024 | | |
|---|---|---|
| 1000 – 1050 Hrs | Inaugural Session by Hon'ble Dignitaries | |
| 1050 – 1110 Hrs | High Tea | |
| 1110 – 1140 Hrs | **Keynote Address** Quantum Computing and Quantum Technology | **Prof. Arun Kumar Pati** TCG CREST |
| **Vertical 1: Quantum Computing** | | |
| 1145 – 1150 Hrs | Opening Remarks by Session Convenor | **Shri Jitesh Choudhary** C-DAC CINE |
| 1150 – 1215 Hrs | **Talk 01** The Era of Quantum Utility and Beyond | **Dr. L Venkata Subramaniam** IBM |
| 1215– 1240 Hrs | **Talk 02** On Demand Quantum circuits for a Quantum computer | **Dr. Anirban Bandyopadhyay** NIMS, Japan |
| 1240 – 1305 Hrs | **Talk 03** Multi-user Fiber-based & Free-space Trusted-node-free Secure Quantum Communication | **Dr. Joyee Ghosh** IIT Delhi |
| 1305 – 1310 Hrs | Concluding Remarks by Session Convenor | **Shri Jitesh Choudhary** C-DAC CINE |
| 1315 – 1415 Hrs | Networking Lunch | |
| **Vertical 2: Quantum Algorithms & Applications** | | |
| 1415 – 1420 Hrs | Opening Remarks by Session Convenor | **Dr. Ethirajan** C-DAC Chennai |
| 1420 – 1445 Hrs | **Talk 01** Novel robust parameters of optical waveguides: Precursors for efficient sensing and communication | **Prof. Prasanta K. Panigrahi** S'O'A University, Bhubaneshwar |

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| 1445 – 1510 Hrs | **Talk 02**<br>Quantum Machine Learning Demystified | **Prof. Amlan Chakraborti**<br>University of Calcutta |
|---|---|---|
| 1510 – 1535 Hrs | **Talk 03**<br>Quantum Algorithms & Applications | **Shri Sivakumar Moorty**<br>Ernst & Young |
| 1535 – 1600 Hrs | **Talk 04**<br>Scaling Quantum Computational Workflow with Circuit Cutting | **Dr. Ritajit Majumdar**<br>IBM |
| 1600 – 1605 Hrs | Concluding Remarks by Session Convenor | **Dr. Ethirajan**<br>C-DAC Chennai |
| 1610 – 1630 Hrs | High Tea | |
| 1630 – 1730 Hrs | **Panel Discussion:**<br>Industry-Academia Synergy for Quantum Innovation and Impact<br><br>**Moderator:**<br>**Prof. Amlan Chakraborti**<br>University of Calcutta | All speakers of the day |
| 1830 – 1930 Hrs | Cultural Program | |
| 1930 – 2100 Hrs | Networking Dinner | |

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| Day 2: December 18, 2024 | | |
|---|---|---|
| 0930 – 1000 Hrs | **Breakfast** | |
| 1000 – 1020 Hrs | **Talk 01** <br> Proposal of User-Authenticated DI-QSDC | **Dr. Goutam Paul** <br> ISI Kolkata |
| **Vertical 3: Quantum Sensing** | | |
| 1020 – 1050 Hrs | Keynote Address | **Prof. Sukanta K. Tripathy** <br> Behrampur University |
| 1050 – 1120 Hrs | **Thematic Session** <br> C-DAC in Quantum Sensing | **Mrs. Munmun Chakraborty** <br> C-DAC Kolkata |
| 1120 – 1130 Hrs | High Tea | |
| 1130 – 1135 Hrs | Opening Remarks by Session Convenor | **Prof. R. P. Singh** <br> PRL Ahmedabad |
| 1135 – 1200 Hrs | **Talk 01** <br> Quantum Sensing using Trapped Atoms and Trapped Ions | **Prof. Bimalendu Deb** <br> IACS Kolkata |
| 1200 – 1225 Hrs | **Talk 02** <br> Spontaneous Parametric Down Conversion and its Application in Quantum Sensing | **Prof. Kanik Palodhi** <br> University of Calcutta |
| 1225 – 1250 Hrs | **Talk 03** <br> Quantum sensing explorations at TCS on the cusp of the second quantum revolution | **Dr. Sourav Chatterjee** <br> TCS Research |
| 1250 – 1255 Hrs | Concluding Remarks by Session Convenor | **Prof. R. P. Singh** <br> PRL Ahmedabad |
| 1300 – 1400 Hrs | Networking Lunch | |
| 1400 – 1450 Hrs | Thematic Address | **Dr. S D Sudarshan** <br> C-DAC Bangalore |
| 1450 – 1500 Hrs | High Tea | |

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| | Vertical 4: Quantum Cryptography | |
|---|---|---|
| 1500 – 1505 Hrs | Opening Remarks by Session Convenor | **Dr. Ch A S Murty** C-DAC Kolkata |
| 1505 – 1530 Hrs | **Talk 01** Securing the Digital Future with Post-Quantum Cryptography | **Prof. Jawar Singh** IIT Patna |
| 1530 – 1555 Hrs | **Talk 02** TLS in the Post-Quantum Era: Challenges and Innovations | **Shri Gaurav Kumar** C-DAC Patna |
| 1555 – 1600 Hrs | Concluding Remarks by Session Convenor | **Dr. Ch A S Murty** C-DAC Kolkata |
| | | |
| 1600 – 1625 Hrs | **Plenary Talk** The Quantum Mind: Architecting the knowledge in the age of Quantum Computing | **Shri Aditya Kumar Sinha** C-DAC Patna |
| | Vertical 5: Quantum AI | |
| 1630 – 1650 Hrs | Recent Initiatives towards Quantum Innovations by C-DAC | **Shri Nishant Kumar Shekhar** C-DAC Patna |
| 1650 – 1710 Hrs | | **Shri Jitesh Choudhary** C-DAC CINE |

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| 1710 – 1720 Hrs | Concluding Remarks | **Shri Aditya Kumar Sinha** C-DAC Patna |
| 1720 – 1725 Hrs | Vote of Thanks and Valedictory | **Shri Jitesh Choudhary** C-DAC CINE |