International Conference on Quantum Information Science and Technology (ICQIST) - 2025

In celebration of International Year of Quantum Science & Technology (IYQ) - 2025

December 09 – December 13, 2025

Program Schedule

Day 1: December 09, 2025			
TIME	TITLE	SPEAKER	DOWNLOAD
9:15 am-10:15 am	Registration		
10:15 am-10:30 am	Inauguration and welcome by TCG CREST Director and CQuERE Director	Director, TCG CREST: Prof. Malabika Sarkar Director, CQuERE: Prof. Bhanu Das	
Session Chair (Morning):			
10:30 am-11:15 am	Plenary talk (Online):	Kenji Ohmori	
11:15 am-11:45 am	Tea Break		
11:45 am-12:15 pm	Relative Nature of Quantum Complementarity: A No-Comparison Theorem	Guruprasad Kar	
12:30 pm-2:30 pm	Lunch Break		
Session Chair (Afternoon):			
2:30 pm-3:00 pm	Magneto-quantum-mechanics: engineering of macroscopic quantum systems using magnetic forces	J. M. Twamley	
3:00 pm-3:20 pm	Industry talk: Bluefors		
3:20 pm-3:40 pm	Industry talk: Quantware & Qblox		
3:40 pm-4:30 pm	Poster session		
4:30 pm-5:00 pm	Tea Break		
5:00 pm-5:30 pm	Quantum Circuit Cutting: Making QPEs work at the NISQ Era	Amlan Chakraborti	
5:30 pm-5:50 pm	A new experimental proposal to test the quantumness of gravity	Debarshi Das	
5:50 pm-6:05 pm	Gottesmann-Knill Limit on One-way Communication Complexity: Tracing the Quantum Advantage down to Magic Resources	Pratik Ghosal	
6:05 pm-6:20 pm	Self-testing in a constrained prepare-measure scenario sans assuming quantum dimension	Souradeep Sasmal	
6:20 p.m-6:40 pm	Special contributory talk: Tightly integrating a GPU and a QPU for fast calibration of multi-qubit circuits	Shlomi Matityahu	
7:00 p.m-9:00 pm	Dinner		

Day 2: December 10, 2025			
TIME	TITLE	SPEAKER	DOWNLOAD
Session Chair (Morning):			
10:00 am -10:30 am	Keynote: Application scale quantum circuit compilation with controlled error	Mohan Sarovar	
10:30 am -11:00 am	Ontic or epistemic distinguishability of identical particles via the Aharonov–Bohm Effect	Yutaka Shikano	
11:00 am-11:30 am	Tea Break		
11:30 am-12:00 pm	Quantum Zeno Effect in the proposed Schrodinger's Pendulum Experiment for enhancing Macroscopic Quantumness	Dipankar Home	
12:00 pm-12:30 pm	Industry talk: QuantrolOx		
12:30 pm-12:40 pm	Industry talk: Quantum Machines		
12:40 pm-2:30 pm	Lunch Break		
Session Chair (Afternoon):			

TIME	TITLE	SPEAKER	DOWNLOAD
2:30 pm-3:00 pm	Quantification of multipartite entanglement as a resource and the role of measurement processes for multiqubit systems	Debasis Sarkar	
3:00 pm-3:30 pm	Re-entrant many-body localization on a driven quantum circuit	Tapan Mishra	
3:30 pm-4:00 pm	Towards modular and resource-efficient quantum algorithms	Alok Shukla	
4:00 pm-4:30 pm	Poster session		
4:30 pm-5:00 pm	Tea Break		
5:00 pm-5:30 pm	Decoherence in the NISQ-era: Dr. Jekyll or Mr. Hyde	Archana Kamal	
5:30 pm-6:00 pm	Quantum Singular Value Transformation without block encodings	Shantanav Chakraborty	
6:00 pm-6:20 pm	Zero-Error Nash Equilibrium: Harnessing nonlocal correlation in incomplete information game	Amit Mukherjee	
6:20 pm-6:40 pm	Disti-Mator: an entanglement distillation-based state estimator	Ananda G. Maity	
7:00 pm-9:00 pm	Conference Dinner		

Day 3: December 11, 2025			
TIME	TITLE	SPEAKER	DOWNLOAD
Session Chair (Morning):			
10:00 am-10:30 am	Enhancing wave-particle duality	Almut Beige	
10:30 am-11:00 am	Quantum thermodynamics: An open system approach	Subhashish Banerjee	
11:00 am-11:30 am	Tea Break		
11:30 am-12:00 pm	Restrictions on Quantum Advantage in Quantum Machine Learning	Apoorva Patel	
12:00 pm-12:30 pm	Boson mediated non-local gates for fault tolerant quantum processing	Gavin K. Brennen	
12:30 pm-2:30 pm	Lunch Break		
Session Chair (Afternoon):			
2:30 pm-3:00 pm	Keynote: Hamiltonian simulation-based quantum-selected configuration interaction for quantum chemical calculations using quantum computers	Kenji Sugisaki	
3:00 pm-3:30 pm	Device-Independent Quantum Secret Sharing	Goutam Pal	
3:30 pm-4:00 pm	Discrete-Time Open Quantum Walks for Vertex Ranking in Graphs	Supriyo Dutta	
4:00 pm-4:30 pm	Communication efficient quantum secret sharing	Pradeep Sarvepalli	
4:30 pm-5:00 pm	Tea Break		
5:00 pm-5:30 pm	Quantum error correction and fault-tolerant circuits using qudits	Shayan Srinivasa Garani	
5:30 pm-5:45 pm	Realization of NV- Spins ensemble-based quantum transducer at millikelvin temperatures	Amit Bhunia	
5:45 pm-6:00 pm	Universal deterministic entanglement distribution via quantum repeaters	Mir Alimuddin	
6:00 pm-6:45 pm	Live Demo by QuantrolOx		
7:00 pm-9:00 pm	Dinner		

Day 4: December 12, 2025			
TIME	TITLE	SPEAKER	DOWNLOAD
Session Chair (Morning):			
10:00 am-10:45 am	Plenary talk: Quantum computing with atomic qubit arrays	Mark Saffman	
10:45 am-11:15 pm	Quantum Computing with QuEra's Programmable Neutral Atom Computers	Arinjoy De	
11:15 am-11:45 pm	Tea break		
11:45 pm-12:15 pm	Real-time detection of cold atoms for quantum computing and sensing	Saptarishi Chaudhuri	
12:15 pm-12:45 pm	Pushing non-macrorealism to its extreme limits	Usha Devi	
12:45 pm-2:30 pm	Lunch Break		
Session Chair (Afternoon):			
2:30 pm-3:00 pm	Keynote: Not yet declared	Rajamani Vijayaraghavan	
3:00 pm-3:30 pm	Quantum computing with superconducting qubits	Christian Schneider	
3:30 pm-4:00 pm	Towards Assurance of Quantum Key Distribution	Rajagopal Nagarajan	
4:00 pm-4:30 pm	Tea Break		
4:30 pm-5:00 pm	Quantum metrology through photon added cat state and other nonclassical states	Prasanta K. Panigrahi	
5:00 pm-5:30 pm	Universal Syndrome-based recovery for noise-adapted quantum error correction	Prabha Mandayam	
5:30 pm-6:00 pm	A new global measure of teleportation in Quantum Networks	Indranil Chakraborty	
6:00 pm-6:15 pm	Limits of Absoluteness of Observed Events in Timelike Scenarios: A No-Go Theorem	Sumit Mukherjee	
6:15 pm-6:30 pm	Self-testing of nonmaximal genuine entangled states using tripartite Hardy relations	Ranendu Adhikary	
7:00 pm-9:00 pm	Dinner		

Day 5: December 13, 2025			
TIME	TITLE	SPEAKER	DOWNLOAD
Session Chair (Morning):			
10:00 am-10:30 am	Keynote: Spin Network Automata for Quantum Information Processing	Sougato Bose	
10:30 am-11:00 am	Super-Extensive Charging Power in the Absence of Global Operations	Sibashish Ghosh	
11:00 am-11:30 am	Tea Break		
11:30 am-12:00 pm	Not yet declared	Arvind	
12:00 pm-12:30 pm	Efficient detection of quantum resources	Archan S. Majumdar	
12:30 pm-2:30 pm	Lunch Break		
Session Chair (Afternoon):			
2:30 pm-3:00 pm	Not yet declared	Adolpho D. Campo	
3:00 pm-3:30 pm	Not yet declared (Online)	Kishor Bharti	
3:30 pm-4:00 pm	Anomalous Landau levels in inhomogeneous fluxes: From fundamental physics to quantum simulations	Krishanu Roychowdhury	
4:00 pm-4:15 pm	Minimum Detection Efficiencies for Loophole-free Genuine Nonlocality Tests	Subhendu Bikash Ghosh	
4:15 pm-4:30 pm	Semi-device-independent self-testing of unitary operations	Prabuddha Roy	
4:30 pm-4:45 pm	Nature of Quantum Correlation in triangle network	Amit Kundu	
4:45 pm-5:00 pm	Concluding session		
5:00 pm-5:30 pm	Tea break		