

International Symposium on Quantum Information and Communication (ISQIC) - 2025

In celebration of International Year of Quantum Science & Technology (IYQ) - 2025
March 31 – April 02, 2025

Program Schedule

Day 1: March 31, 2025			
TIME	TITLE	SPEAKER	DOWNLOAD
9:30 am -10 am	Registration		
10:00 am-10:30 am	Innauguration and welcome by TCG CREST Director and CQuERE Director	Swapan Bhattacharya Bhanu Pratap Das	
Session Chair (Morning): Anirban Pathak			
10:30 am-11:00 am	Repeater-based optimal quantum teleportation in noisy scenario: the case of qubits	Sibasish Ghosh	
11:00 am-11:30 am	Tea Break		
11:30 am-12:00 pm	Experiments in Quantum Communication	R. P. Singh	
12:00 pm-12:30 pm	Entangled Qubit Sources for Quantum Secure Communication and Imaging	Bhaskar Kanseri	
12:30 pm-2:30 pm	Lunch Break		
Session Chair (Afternoon): R. P. Singh			
2:30 pm-3:30 pm	Engineering Challenges for the Emerging Quantum Networks	Prem Kumar	
3:30 pm-4:00 pm	Many facets of security in the post-quantum world	Anirban Pathak	
4:00 pm-4:30 pm	Decoherence vs diffusion: testing the quantum nature of spacetime	J. Oppenheim	
4:30 pm-5:00 pm	Tea Break		
5:00 pm-5:30 pm	Conditional entropy and information of quantum processes	Siddhartha Das	
5:30 pm-6:00 pm	Dynamical Many Body Localization in Floquet Spin Chains: From Simple Quantum Magnets to Discrete Time Crystals	Analabha Roy	
6:00 p.m-6:30 pm	Space, time and quantum probabilities: from fundamental insights to protocols	Marcus Muller	

Day 2: April 01, 2025			
TIME	TITLE	SPEAKER	DOWNLOAD
Session Chair (Morning): Debasis Sarkar			
10:00-11:00 am	Quantum communications as a global resource for fundamental studies and applications	Paolo Villoresi	
11:00 am-11:30 am	Tea Break		
11:30 am-12:00 pm	Quantum indeterminism vs classical determinism, and a toy theory that challenges the divide	Giulio Chiribella	
12:00 pm-12:30 pm	Quantum heat exchange fluctuation	A R Usha Devi	
12:30 pm-2:30 pm	Lunch Break		
Session Chair (Afternoon): A. R. Usha Devi			
2:30 pm-3:00 pm	All-fiber-integrated tunable polarization-entanglement distribution of 100-km for multiuser QKD over metro-area fiber-optic networks	Joyee Ghosh	
3:00 pm-3:30 pm	Joint Measurability on Pair of Parallel vs Anti-Parallel State of Spin-1/2 Systems	Manik Banik	

3:30 pm-4:00 pm	Quantum State Discrimination task- Some recent results	Debasis Sarkar	
4:00 pm-4:30 pm	Quantum Secure Communication–Theory and Practices	Arpita Maitra	
4:30 pm-5:00 pm	Tea Break		
5:00 pm-6:00 pm	Poster session		
6:00 pm-6:30 pm	Bell nonlocality in quantum networks	Nicolas Brunner	
6:30 pm-9:00 pm	Conference Dinner		

Day 3: April 02, 2025			
TIME	TITLE	SPEAKER	DOWNLOAD
Session Chair (Morning): Sibasish Ghosh			
10:00 am-11:00 am	Quantum time and quantum spacetime	Lorenzo Maccone	
11:00-11:30 am	Tea Break		
11:30 am-12:00 pm	Quantum measurements drive quantum communication	Archan S. Majumdar	
12:00 pm-12:30 pm	Chained Bell inequality: Robust self-testing, certified randomness and secure key rate	Alok Kumar Pan	
12:30 pm-2:30 pm	Lunch Break		
Session Chair (Afternoon): Archan S. Majumdar			
2:30 pm-3:00 pm	Secure Semi-Device-Independent Quantum Random Number Generation via Leggett-Garg Inequality Violations: From Photonic Systems to Superconducting Qubits	Urbasi Sinha	
3:00 pm-3:30 pm	Entanglement catalysis and the second law of entanglement manipulation	Alexander Streltsov	
3:30 pm-4:00 pm	Hidden Markov models - classical and quantum mechanisms, and beyond	Andreas Winter	
4:00 pm-4:30 pm	Multi-slit interference and discrimination of quantum states	Prasanta K. Panigrahi	
4:30 pm-5:00 pm	Tea Break		
5:00 pm-5:30 pm	Upper bounds on secret key rate in various quantum and beyond quantum cryptographic scenarios	Karol Horodecki	
5:30 pm-5:50 pm	Entanglement monogamy in indistinguishable particle systems	Soumya Das	
5:50 pm-6:00 pm	Concluding Remarks		