

NATIONAL SYMPOSIUM
ON
QUANTUM INFORMATION AND FOUNDATIONS
February 20-21, 2025

Physics & Applied Mathematics Unit, Indian Statistical Institute, Kolkata, India

Program Schedule

Day 1: Thursday (20/02/2025)

09:45 am – 10:15 am

Registration

Venue: P. J. Auditorium, 1st Floor, P. J. Building

10:15 am – 10:30 am

Inauguration

Session Chair	Time	Speaker	Title of the talk
10:30 am – 12:15 pm Chair: Archana S. Majumdar (SNBNCBS, Kolkata)	10:30 am – 11:05 am	Subhashish Banerjee (IIT Jodhpur)	Non-Markovian Physics: Interface with Quantum Speed Limit and Quantum Thermodynamics
	11:05 am – 11:40 am	Pankaj Agrawal (TCG Crest, Kolkata)	Violation of Bell Monogamy Relations
	11:40 am – 12:15 pm	Amit Mukherjee (IIT Jodhpur)	Quantum Entanglement and Operations Research: An Interdisciplinary Frontier
Tea Break 12:15 pm – 12:35 pm			
12:35 pm – 01:40 pm Chair: Pankaj Agrawal (TCG Crest, Kolkata)	12:35 pm – 01:10 pm	Md Manirul Ali (CIT Chennai)	Quantumness of electron transport, interplay of quantum coherence and charge currents in nanoelectronic systems
	01:10 pm – 01:45 pm	Chandan Datta (IIT Jodhpur)	Detecting quantum resources in a semi-device independent framework
Lunch Break 01:45 pm – 03:00 pm (Lunch packets will be served on the Gr. Fl. of A. N. Kolmogorov Bhavan, opposite to P. J. Building)			
03:00 pm – 04:10 pm Chair: Guruprasad Kar (ISI, Kolkata)	03:00 pm – 03:35 pm	Manik Banik (SNBNCBS, Kolkata)	No-Go Theorem for Generic Simulation of Qubit Channels with Finite Classical Resources
	03:35 pm – 04:10 pm	Ritabrata Sengupta (IISER Berhampur)	The Likelihood Operator and Fisher Information in Quantum Probability
Tea Break 04:10 pm – 04:30 pm			

04:30 pm – 05:40 pm Chair: Debasis Sarkar (CU, Kolkata)	04:30 pm – 05:05 pm	Sanatan Chattopadhyay (CU, Kolkata)	Voltage Tunable Quantum Dots (VTQDs) for Realising Quantum Superposition in Complementary-Metal-Oxid- Semiconductor (CMOS) structures
	05:05 pm – 05:40 pm	Alok K. Pan (IIT Hyderabad)	Device-independent full network nonlocality for arbitrary-party and unbounded-input scenario

Day 2: Friday (21/02/2025)

Session Chair	Time	Speaker	Title of the talk
10:00 am – 11:45 am Chair: Subhashish Banerjee (IIT Jodhpur)	10:00 am – 10:35 am	Sibasish Ghosh (IMSc., Chennai)	Quantum mean force Gibbs state in weak and ultra-strong coupling limits
	10:35 am – 11:10 am	Debasis Sarkar (CU, Kolkata)	Network Correlations and source independent scenario
	11:10 am – 11:45 am	Naqeeb Ahmad Warsi (ISI, Kolkata)	Generalization Error bounds on Quantum Learning Algorithm via Petz Renyi divergence and Rate distortion
Tea Break 11:45 am – 12:05 pm			
12:05 am – 01:15 am Chair: Sibasish Ghosh (IMSc., Chennai)	12:05 pm – 12:40 pm	Chiranjib Mitra (IISER Kolkata)	Pulse schemes for increasing coherence time in an ensemble of nitrogen vacancy centres in diamond
	12: 40 pm – 01:15 pm	Sourin Das (IISER Kolkata)	From Monopole-Induced Berry Phase to Quadrupolar Berry Phase
Lunch Break 01:15 pm – 03.00 pm (Lunch will be served at ISI Guest House)			
03:00 pm – 04:10 pm Chair: Chiranjib Mitra (IISER Kolkata)	03:00 pm – 03:35 pm	Sutapa Saha (HRI, Prayagraj)	The communication power of a noisy qubit
	03:35 pm – 04:10 pm	Arup Roy (Hooghly Mohsin College)	Strong Inequivalence of Quantum Nonlocal Resources
Poster session 04:10 pm – 06.00 pm (along with high tea)			
See the Abstract Book for all the titles			