

# Conference on Quantum Foundations, Technology and Applications

October 18-21, 2019



Day 1

October 18, 2019

02:00 PM – 02:30 PM	<b>INAUGURATION</b>	
	<b>Session 1 Chair: N D Haridass</b>	
02:30 PM – 03:10 PM	Anil Kumar	Quantum Information Processing by NMR: Interesting results from our Laboratory
03:10 PM - 03:45 PM	Arul Lakshminarayan	Entangling power and thermalization
03:45 PM - 04:05 PM	Shruti Dogra	Robustness of a superadiabatic process using a superconducting circuit
04:05 PM – 04:30 PM	<b>TEA BREAK</b>	
	<b>Session 2 Chair: Mario Zlman</b>	
04:30 PM – 05:05 PM	Dipankar Home	Certifying, Quantifying and Enhancing Genuine Randomness
05:05 PM – 05:25 PM	Avijit Mishra	Multifunctional thermal management with a optomechanical system
05:25 PM – 05:45 PM	Soumyakanti Bose	Necessary and Sufficient Criteria for Gaussian Quantum Teleportation

Day 2

October 19, 2019

	<b>Session 1 Chair: Dipankar Home</b>	
09:30 AM - 10:10 AM	Lajos Diosi	Spontaneous wave function collapse with frame dragging and induced gravity
10:10 AM - 10:45 AM	N D Hari Dass	Asymptotic behaviour of quantum trajectories generated by repeated weak measurements
10:45 AM – 11:05 AM	Benjamin Garcia	Efficient sorting of vector modes
11:05 AM – 11:30 AM	<b>TEA BREAK</b>	
	<b>Session 2 Chair: Anil Kumar</b>	
11:30 AM – 12:05 PM	Mario Ziman	Incompatibility and nonlocality of quantum process measurements
12:05 PM – 12:40 PM	Subhash Chaturvedi	Pancharatnam phase and in-phase expansions in terms of coherent states
12:40 PM – 01:00 PM	Kaumudibikash Goswami	Exploring indefinite causal order
01:00 PM – 02:00 PM	<b>LUNCH</b>	
02:00 PM – 03:00 PM	<b>POSTER</b>	
03:00 PM – 03:30 PM	<b>TEA BREAK</b>	
	<b>Session 3 Chair: Thomas Konrad</b>	
03:30 PM – 04:05 PM	Ravindra Pratap Singh	Controlling spatial modes of down converted photons with superposed vortex beams
04:05 PM - 04:40 PM	Archan S Majumdar	Sequential sharing of quantum nonlocal correlations among multiple observers
04:40 PM - 05:00 PM	M.S. Sidhu	Quantum sensing of vibration and temperature using Nitrogen Vacancy Centers
05:00 PM – 05:20 PM	Anindya Banerji	Controlling the orbital angular momentum spectrum of down converted photons
05:20 PM – 05:40 PM	Saronath Halder	Construction of noisy bound entangled states and the range criterion

## Day 3

### October 20, 2019

Session 1 Chair: Apoorva Patel		
09:30 AM - 10:10 AM	Dieter Sutar	Efficient and robust quantum gates for hybrid quantum registers
10:10 AM - 10:45 AM	Sibasish Ghosh	Quantum precision thermometry with weak measurement
10:45 AM – 11:05 AM	Debmalya Das	Quantum heat engine based on level degeneracy
11:05 AM – 11:30 AM TEA BREAK		
Session 2 Chair: Lajos Diosi		
11:30 AM – 12:05 PM	Thomas Konrad	An alternative test of Bell's theorem?
12:05 PM – 12:40 PM	Zafer Gedik	Mutually Unbiased Bases and Quantum Computation
12:40 PM – 01:00 PM	A.P. Yasir	Measuring the state of OAM of light
01:00 PM – 02:00 PM LUNCH		
02:00 PM – 03:00 PM POSTER		
03:00 PM – 03:30 PM TEA BREAK		
Session 3 Chair: Dieter Sutar		
03:30 PM – 04:05 PM	T. S. Mahesh	Push-Pull Optimization of Quantum Controls
04:05 PM - 04:40 PM	Ritabrata Sengupta	Distinguishability classes, resource sharing, and bound entanglement distribution
04:40 PM - 05:15 PM	Umakant Rapol	Atom-Optic kicks rotor for studies on engineering decoherence, optimal diffusion and Atom Interferometry
05:15 PM – 05:45 PM	Bindiya Arora	Role of atomic physics in Quantum Computation
05:45 PM – 06:15 PM	Atul Kumar	Entanglement, Nonlocal Correlations, and Quantum Games

## Day 4

### October 21, 2019

Session 1 Chair: Zafer Gedik		
09:30 AM - 10:10 AM	Apoorva Patel	Understanding the Born rule in weak quantum measurements
10:10 AM - 10:45 AM	Anil Shaji	Non-Markovian open dynamics from collision models
10:45 AM – 11:20 AM	Prasanta K Panigrahi	``Quantum" light from a dipole coupled two-level atom system
11:20 AM – 11:50 AM TEA BREAK		
Session 2 Chair: P Panigrahi		
11:50 AM – 12:25 PM	Rajesh V Nair	The emission properties of quantum emitters studied using the deterministic changes in the local density of photon states
12:25 PM – 12:55 PM	Arun Sehrawat	Uncertainty relations on the joint numerical range of operators
12:55 PM – 01:15 PM	Ajay Kumar	Quantum walks perspective in the formal language recognition
01:15 PM – 01:30 PM	Vote of Thanks and Awards	
LUNCH		