

Schedule

P : Plenary Speaker, **I** : Invited Speaker, **N** : Nobel Laureate.

Day 1, Tuesday, 12 November 2024

09:00–10:25	Registration		
10:30–12:00	Inauguration		
	Hon'ble Minister of State (Independent Charge), Dept. of Science and Technology India (Chief Guest) Prof. Bertrand Halperin Harvard University, USA (Guest of Honor) Dr. Ajai Chowdhry Chairman, National Quantum Mission, and Founder, HCL (Guest of Honor) Prof. Subir Sachdev Harvard University, USA (Guest of Honor) Prof. Ganapathy Baskaran IIT Madras, Chennai (Guest of Honor)		
12:00–12:25	Tea Break		
	Chair: Amitabha Lahiri, SNBNCBS		
12:30–13:15	P	Subir Sachdev Harvard University, USA	From the Sachdev-Ye-Kitaev model to theories of strange metals and charged/rotating black holes
13:20–13:55	I	Avinash Mahajan IIT Bombay	(H,Li) ₆ Ru ₂ O ₆ : A zero-field Ru ³⁺ -based Kitaev Quantum Spin Liquid
14:00–15:20	Lunch Break		
	Chair: Indra Dasgupta, IACS Kolkata		
15:25–16:10	P	Jainendra Jain Pennsylvania State University, USA	Complex Emergent Bosons and Even-Denominator Fractional Quantum Hall Effect
16:15–16:50	I	Nandini Trivedi Ohio State University, USA	My Entangled Life in Between Bosons and Fermions
16:55–17:00	Sponsored Session by IOP Publishing Limited		
17:00–17:20	Tea Break		
	Chair: Indra Dasgupta, IACS Kolkata		
17:25–18:00	I	Goutam Sheet IISER Mohali	Superconductivity under uniaxial pressure in elemental metals
18:05–18:40	I	Amit Ghosal IISER Kolkata	Superconducting Vortices with Non-metallic Cores

Day 2, Wednesday, 13 November 2024

09:00–09:25	Registration		
	Chair: Priya Mahadevan, SNBNCBS		
09:30–10:15	P	Nitin Samarth Pennsylvania State University, USA	Emergent superconductivity in epitaxial quantum materials
10:20–10:55	I	Pratap Raychaudhuri TIFR	Visualizing Pinned vortex liquids and inverse melting in superconducting thin films
11:00–11:25	Tea Break		
	Chair: Tanusri Saha-Dasgupta, SNBNCBS		
11:25–12:10	P	Steven Kivelson Stanford University, USA	Absence of BEC to BCS crossover in the cuprate superconductors
12:15–12:50	I	S M Yusuf BARC	Quantum Magnetism in Low Dimensional Spin Systems
13:00–14:20	Lunch Break		
	Chair: Subham Majumdar, IACS Kolkata		
14:25–15:00	I	Robert Seiringer Institute of Science and Technology Austria	Validity of the Gross-Pitaevskii equation for the description of dilute trapped Bose gases
15:05–15:40	I	Md. Kamrul Hassan University of Dhaka, Bangladesh	Historical perspective on the birth of Bose-Einstein statistics and percolation transition
15:45–16:10	Poster session with Tea & Snacks		
16:10–18:00	Poster Session		

Day 3, Thursday, 14 November 2024

	Chair: Manoranjan Kumar, SNBNCBS		
09:30–10:15	P	Bertrand Halperin Harvard University, USA	Bosons, fermions and anyons: Fractional statistics and the quantized Hall effects
10:20–10:55	I	Thierry Giamarchi University of Geneva, Switzerland	Dimensional crossover and Bose-Einstein condensation
11:00–11:25	Tea Break		
	Chair: Arijit Haldar, SNBNCBS		
11:25–12:10	P	Mohit Randeria Ohio State University, USA	Theorist's Perspective: BCS-BEC Crossover and Bounds on Superconducting T_c
12:15–12:50	I	Sunil Nair IISER Pune	Interfacial magnon drag in a ferromagnet/metal bilayer device
12:50–13:00	Sponsored Session by Oxford Instruments		
13:00–14:20	Lunch Break		
	Chair: Chiranjib Mitra, IISER Kolkata		
14:25–15:10	P	Shivaji Sondhi Oxford University, United Kingdom	Are superconductors Bose condensates?
15:15–15:50	I	Arun Paramekanti University of Toronto, Canada	Phonon driven dynamics in multipolar Mott insulators
15:55–16:20	Photo session, Poster session with Tea & Snacks		
16:20–18:00	Poster Session		

Day 4, Friday, 15 November 2024

	Chair: Anjan Barman, SNBNCBS		
09:30–10:15	P	Stuart S.P. Parkin Max Planck Institute, Halle, Germany	Racetrack Memory 5.0
10:20–10:55	I	Arindam Ghosh IISc	Engineering interfaces in metals for strong electron-lattice coupling
11:00–11:25	Tea Break		
	Chair: Arti Garg, SINP		
11:25–12:10	P	T V Ramakrishnan IISc	High Temperature Superconductivity in Cuprates: Mainly Phenomena from a Theorist's Perspective
12:15–12:50	I	Atsushi Fujimori University of Tokyo, Japan	Nodal metal versus antiferromagnetic metal in an extremely underdoped clean inner CuO ₂ planes
12:50–13:00	Sponsored Session by Thermofisher		
13:00–14:20	Lunch Break		
	Chair: Indranil Das, SINP		
14:25–15:10	P	Burkard Hillebrands University of Kaiserslautern-Landau, Germany	Transport phenomena in Bose-Einstein magnon condensates
15:15–15:50	I	Tanmoy Das IISc	Fractional orbitals and Tight-Binding Gauge Fields in Flat Bands and Superconductors
15:55–16:15	Tea Break		
	Chair: Prabhat Mandal, SNBNCBS		
16:20–16:55	I	Satyajit Banerjee IIT Kanpur	Exploration of emergent rich strongly correlated state in SmB ₆ and a comparison of this system with a conventional topological insulator Bi ₂ Se ₃
17:00–17:35	I	Arnab Sen IACS, Kolkata	Aspects of confinement and weak universality in a (2+1)-d lattice gauge theory with annealed Q = ± 2 charges
17:40–18:15	I	Yogesh Singh IISER Mohali	Crystal growth of quasi 1D materials with strong spin-orbit coupling in the Na-Ru-O system

Day 5, Saturday, 16 November 2024

	Chair: Sugata Ray, IACS Kolkata		
09:30–10:15	N	William D. Phillips National Institute of Standards and Technology, USA	From the birth of quantum indistinguishability and quantum statistics to the achievement of Bose-Einstein condensation in atomic gases
10:20–10:55	I	M. Zahid Hasan Princeton	New Frontiers in Topological Quantum Matter
11:00–11:25	Tea Break		
	Chair: Sugata Ray, IACS Kolkata		
11:25–12:10	P	G. Baskaran IIT Madras	There is Plenty of Room for Room Temperature Superconductivity in Quantum Spin Liquids
12:15–12:50	I	Sumilan Banerjee IISc	Measurement-Induced Superconductor-Insulator Transition in Weakly Monitored Josephson Junction Arrays
12:50–13:00	Sponsored Session by NETWEB Technologies		
13:00–14:20	Lunch Break		
	Chair: Debnarayan Jana, University of Calcutta		
14:25–15:00	I	Subhro Bhattacharjee ICTS	Interacting SPT, duality and phase transition in dimerised XXZ spin-1/2 chain
15:05–15:40	I	Amit Agarwal IIT Kanpur	Light-induced Nonlinear Spin Magnetization
15:45–16:10	Tea Break		
	Chair: Debnarayan Jana, University of Calcutta		
16:15–16:50	I	Shantanu Mukherjee IIT Madras	Role of Unconventional Superconductivity in Monolayer Di-Chalcogenide Superconductors
16:55–17:30	Closing remarks		