

# चतुर्थ पीआरएल सीसीएमपी

## 4<sup>th</sup> PRL CCMP

Duration: 6-8 February 2023

Venue: K. R. Ramanathan Auditorium, PRL main campus

### Day 1: 6<sup>th</sup> February

8:45 - 9:30 AM	Registration (KRR Auditorium Foyer)
9:30 - 10:00 AM	Inauguration
Session 1 (Chair: Yuval Gefen*)	
10:00 - 10:45 AM	Sumathi Rao (ICTS Bengaluru) <i>Non-abelian anyons: From Majoranas to parafermions</i>
10:45 AM - 11:15 AM: Conference Photo + Tea break (Admin Lawn)	
Session 1 cont.	
11:15 - 11:45 AM	Shikha Varma (IOP Bhubaneswar) <i>Quantum dots and Stone Wale Topological Defects in Graphene</i>
Session 2 (Chair: Angom Dilip Kumar Singh)	
11:45 AM- 1:15 PM	Marathon display of posters
1:15 - 2:15 PM - Lunch break (Nursery Lawn)	
Session 3 (Chair: Sumathi Rao)	
2:15 - 3:00 PM	Priya Mahadevan (SNBNCBS, Kolkata) <i>Why are twisted bilayers different from their untwisted counterparts?</i>
3:00 - 3:30 PM	C. S. Yadav (IIT Mandi) <i>Electronic transport and Planar Hall effect in Dirac semimetal PdTe<sub>2</sub></i>
3:30 - 4:00 PM	Amit Agarwal (IIT Kanpur) <i>Tunable interband and non-reciprocal plasmons in moire systems</i>
4:00 - 4:30 PM - Tea (Library Lawn)	
4:00 - 5:30 PM	Poster Session 1
6:00 - 7:00 PM	S. Ramachandran (PRL Ahmedabad) <i>Air Pollution and Climate Change: Challenges</i>
7:30 PM onwards: Director's Dinner (Nursery Lawn)	

## Day 2: 7<sup>th</sup> February

Session 4 (Chair: Arindam Ghosh)	
9:00 - 9:45 AM	<b>Yuval Gefen*</b> (Weizmann Institute of Science, Israel) <i>Measuring Entanglement in Electronic Interferometers**</i>
9:45 - 10:15 AM	<b>Gautam Dev Mukherjee</b> (IISER Kolkata) <i>Effect of strain on transition metal dichalcogenides: Experimental investigations at high pressures</i>
10:15 - 10:45 AM	<b>Shantanu Mukherjee</b> (IIT Madras) <i>Topological and ordered phases in Di-Chalcogenide materials NbSe<sub>2</sub> and monolayer 1T'-Wte<sub>2</sub></i>
10:45 - 12:00 AM - Tea & Poster Session (Library Lawn)	
10:45- 12:00 PM	<b>Poster Session 2</b>
Session 5 (Chair: Priya Mahadevan)	
12:00 NOON- 12:30 PM	<b>Pankaj Bhalla</b> (SRM University, AP) <i>Nonlinear Transport/optical effects via quantum geometric quantities</i>
12:30 - 1:00 PM	<b>Samik DuttaGupta</b> (SINP, Kolkata) <i>Electrical switching of metallic antiferromagnet/non-magnet heterostructure</i>
1:00 - 2:00 PM - Lunch break (Nursery Lawn)	
Session 6 (Chair: Pratap Raychaudhuri)	
2:00 - 2:45 PM	<b>Arindam Ghosh</b> (IISc Bangalore) <i>Probing new phases in twisted bilayer graphene with thermoelectricity</i>
2:45 - 3:15 PM	<b>Arijit Saha</b> (IOP, Bhubaneswar) <i>Higher-Order Topological Superconductors: Statics and Dynamics</i>
3:15 - 3:30 PM - Tea (Admin Lawn)	
3:30-7:00 PM Tour to Gandhi Ashram at Sabarmati	
7:30 PM onwards: Conference Dinner (Nursery Lawn)	

## Day 3: 8<sup>th</sup> February

Session 7 (Chair: Gautam Dev Mukherjee)	
<b>9:00 - 9:45 AM</b>	<b>Pratap Raychaudhuri</b> (TIFR, Mumbai) <i>TBA</i>
<b>9:45 - 10:15 AM</b>	<b>Sumilan Banerjee</b> (IISc Bangalore) <i>Quantum oscillations in the magnetization and density of states of insulators</i>
<b>10:15 - 10:45 AM</b>	<b>Ajit C. Balram</b> (IMSc, Chennai) <i>Very high energy collective modes of partons in fractional quantum Hall fluids</i>
<b>10:45 - 11:00 AM</b>	<b>Rajeswari Roy Chowdhury</b> (IISER Bhopal) <i>Unconventional emergent Hall effect phenomena and its modification in a vander Waals ferromagnet <math>Fe_3GeTe_2</math></i>
<b>11:00 - 11:30 AM - Tea break</b> (Admin Lawn)	
Session 8 (Chair: Arijit Saha)	
<b>11:30 - 12:00 NOON</b>	<b>Subhro Bhattacharjee</b> (ICTS, Bengaluru) <i>Non-Kramers Quantum Spin-Ice</i>
<b>12:00 NOON - 12:30 PM</b>	<b>Jayendra Nath Bandyopadhyay</b> (BITS Pilani, Pilani) <i>Floquet engineering of solid-state systems: An algebraic approach</i>
<b>12:30 - 1:00 PM</b>	<b>Santanu K. Maiti</b> (ISI Kolkata) <i>Spintronics in antiferromagnetic helix</i>
<b>1:00 - 2:00 PM - Lunch break</b> (Nursery Lawn)	
Session 9 (Chair: Shikha Varma)	
<b>2:00 - 2:30 PM</b>	<b>Angom Dilip Kumar Singh</b> (Manipur University) <i>Quantum phases of dipolar bosons in a multilayer optical lattice</i>
<b>2:30 - 3:00 PM</b>	<b>Swastika Chatterjee</b> (IISER Kolkata) <i>Oceans of water deep in the Earth's mantle</i>
<b>3:00 - 3:20 PM</b>	<b>Ayan Khan</b> (Bennett University, Noida) <i>Quantum Materials beyond the realms of Gross-Pitaevskii Equation</i>
<b>3:20- 3:35 PM</b>	<b>Deepak Gaur</b> (PRL Ahmedabad) <i>Quench dynamics of ultracold gasses</i>
<b>3:35 -3:50 PM</b>	<b>Bharathiganesh D.</b> (PRL Ahmedabad) <i>SSH model with a non-orientable bulk: union of topology and flat bands</i>
<b>3:50 - 4:15 PM</b>	<b>Valedictory Session</b>
<b>4:15 PM</b>	<b>Tea</b> (Admin Lawn)

\*visitor during 6 -7 February 2023    \*\*Theoretical Physics colloquium