

# PHYCON-25 Program Schedule

**Day 1: 21-03-2025**

Timeline	Activity	Session
09:20 – 09:25	• Lamp Lighting and felicitation to the guests	Session 1
09:25 – 09:30	• Introduction to PHYCON-25	
09:30 – 09:40	• HoD's address	
09:40 – 10:00	• Director's address	
10:00 – 10:50	<ul style="list-style-type: none"> <li>• <b>Plenary talk -1 by Prof. Satishchandra Ogale</b> Director RISE, Kolkata, IISER Pune</li> </ul> <p><i>Title: The evolving landscape of new energy and sustainability: unleashing the power of intelligent materials design</i></p>	
10:50 – 11:20	• High-Tea	
11:20 – 12:50	<ul style="list-style-type: none"> <li>• <b>OP-1: Ms. Srijita Chakraborty</b> (IIT Hyderabad)</li> </ul> <p><i>Title: First principles studies on the defect induced magnetism in 2D van der Waals semiconductors for spintronics applications</i></p>	Session 2
	<ul style="list-style-type: none"> <li>• <b>OP-2: Pronoy Chakraborty</b> (IIT Ropar)</li> </ul> <p><i>Title: BCCA and Null Open Strings</i></p>	
	<ul style="list-style-type: none"> <li>• <b>OP-3: Hariprasad M S</b> (Lovely Professional University, Punjab)</li> </ul> <p><i>Title: A theoretical study on enhanced electron acceleration induced by bessel beam and wiggler magnetic field</i></p>	
	<ul style="list-style-type: none"> <li>• <b>OP-4: Rajat Roy</b> (IIT Ropar)</li> </ul> <p><i>Title: Study of neutron production cross-sections in <math>(\alpha, n)</math> reactions</i></p>	
	<ul style="list-style-type: none"> <li>• <b>OP-5: Dr. Rohit Singh</b> (University of Allahabad)</li> </ul> <p><i>Title: Renormalization-group for a nonlocal Ginzburg-Landau model and critical exponents of some uniaxial ferromagnets</i></p>	
	<ul style="list-style-type: none"> <li>• <b>OP-6: Sagar Shayer Yaar</b> (IIT Ropar)</li> </ul> <p><i>Title: Studying the interaction of amino acid with lipid monolayer at air-water interface using nonlinear sum frequency generation vibrational spectroscopy</i></p>	
	<ul style="list-style-type: none"> <li>• <b>OP-7: Shubradeep Majumder</b> (Jawaharlal Nehru University New Delhi)</li> </ul>	

	<i>Title: Effect of lattice boundary on Anderson localization of nonclassical light in optical waveguide arrays</i>	
12:50 – 01:10	• Quiz	
01:10 – 02:00	• Lunch	
02:00 – 04:00	• Poster session • Tea	Session <b>3</b>
04:00 – 04:50	• <b>Plenary talk -2 by Prof Anand Jha (IIT Kanpur)</b>  <i>Title: Partial optical coherence: Applications in quantum state measurement and imaging</i>	
04:50 – 06:00	• <b>OP-8: Prarena Jamwal (IIT Ropar)</b>  <i>Title: Topological and superconducting aspects of monolayer CrH<sub>2</sub></i>	Session <b>4</b>
	• <b>OP-9: Jhuma Dutta (IISER Mohali)</b>  <i>Title: Enhanced energy transfer in strongly coupled organic inorganic heterostructures</i>	
	• <b>OP-10: Amanjot (IIT Ropar)</b>  <i>Title: Entrance channel effect on low-energy incomplete fusion</i>	
	• <b>OP-11: Deepika Sharma (Himachal Pradesh University, Shimla)</b>  <i>Title: Cost-effective M-type hexaferrites: The future alternate to rare earth magnets for electric vehicles</i>	
	• <b>OP-12: Rajat (IIT Ropar)</b>  <i>Title: Collective excitations and coarsening dynamics in spin-orbit-coupled spinor condensates</i>	
06:00 – 07:00	• Cultural event	
07:30 onwards	• Gala dinner	

## Day 2: 22-03-2025

Timeline	Activity	Session
09:30 – 10:20	<ul style="list-style-type: none"> <li><b>Plenary talk -3 By Prof M Krishnamurthy</b> Director of TIFR Hyderabad <i>Title: Converting liquid droplets to mini-accelerators using ultrafast lasers</i></li> </ul>	Session <b>1</b>
10:20 – 11:10	<ul style="list-style-type: none"> <li><b>Plenary talk -4 by Prof Peter Kruse</b> McMaster University, Canada <i>Title: Chemiresistive sensors for applications in aqueous environments</i></li> </ul>	
11:10 – 11:30	<ul style="list-style-type: none"> <li>• High Tea</li> </ul>	
11:30 – 12:45	<ul style="list-style-type: none"> <li><b>OP-13: Rohit Duglet</b> (Himachal Pradesh University, Shimla) <i>Title: Dielectric and magnetic tuning of Bi-substituted barium hexaferrites for microwave absorption applications</i></li> </ul>	Session <b>2</b>
	<ul style="list-style-type: none"> <li><b>OP-14: Rathnakaran S R</b> (IIT Ropar) <i>Title: Ancilla measurement-based Quantum Otto engine using double-pair spin architecture</i></li> </ul>	
	<ul style="list-style-type: none"> <li><b>OP-15: Sachin Sharma</b> (Himachal Pradesh University, Shimla) <i>Title: Compositional optimization and morphotropic phase boundary evolution in <math>(Ba_{0.95}Ca_{0.05})(Sn_xTi_{1-x})O_3</math> ceramics for sustainable green energy storage</i></li> </ul>	
	<ul style="list-style-type: none"> <li><b>OP-16: Love Kumar Sharma</b> (IIT Ropar) <i>Title: Spatiotemporal soliton in a parabolic multimode fiber</i></li> </ul>	
	<ul style="list-style-type: none"> <li><b>OP-17: PAWAN KUMAR</b> (IIT Ropar) <i>Title: Buckling instability mediated wetting behavior of low-energy ion irradiated polydimethylsiloxane (PDMS) films</i></li> </ul>	
	<ul style="list-style-type: none"> <li><b>OP-18: Anish Sharma</b> (NIT Sikkim) <i>Title: Coherence dynamics of maximally coherent spin qubit in random spin environments: Application to single-qubit magnetometry</i></li> </ul>	
12:45 – 01:15	<ul style="list-style-type: none"> <li><b>TP-1: Nexus Analytical</b></li> <li><b>TP-2: Anatech Instrument</b></li> <li><b>TP-3: New Age Instruments</b></li> </ul>	
01:15 – 02:00	<ul style="list-style-type: none"> <li>• lunch</li> </ul>	

02:00 – 04:00	<ul style="list-style-type: none"> <li>Poster session</li> <li>Tea</li> </ul>	Session 3
04:00 – 04:50	<ul style="list-style-type: none"> <li><b>Plenary talk- 5 by Prof Raghunath Sahoo (IIT Indore)</b> <i>Title: Recreating the universe at the large hadron collider</i></li> </ul>	
	<ul style="list-style-type: none"> <li><b>OP-19: Gaurav Bassi (IIT Ropar)</b> <i>Title: High performance PtSe<sub>2</sub>/MoS<sub>2</sub> heterostructure for broadband and ultrafast photodetector</i></li> </ul>	
	<ul style="list-style-type: none"> <li><b>OP-20: Ashish (IIT Ropar)</b> <i>Title: Room temperature single photon source for quantum technologies</i></li> </ul>	
04:50 – 06:00	<ul style="list-style-type: none"> <li><b>OP-21: Balwinder Singh (Punjabi University Patiala)</b> <i>Title: Investigation of L- Shell X-Ray Relative Intensities in 82Pb Excited by High-Energy Bq+Ions at 55 and 60 MeV</i></li> </ul>	Session 4
	<ul style="list-style-type: none"> <li><b>OP-22: Nancy Ghangas (IIT Ropar)</b> <i>Title: Dynamic Control of Light Localization in Photonic Crystals</i></li> </ul>	
	<ul style="list-style-type: none"> <li><b>OP-23: Abhishek Kumar (IIT Ropar)</b> <i>Title: Ultra-low magnetic damping in epitaxial doped lithium spinel ferrite films</i></li> </ul>	
06:00 onwards	<ul style="list-style-type: none"> <li><b>Awards, Vote of thanks</b></li> </ul>	

\*OP: Oral Presentation

\*TP: Technical Presentation

\*PP: Poster Presentation

#### Venue:

Plenary talks and Oral Presentations — Senate Hall IIT Ropar

Poster Presentation — Auditorium Foyer