

LIST OF PROJECTS FOR 2024-25-I SEMESTER

<u>Sl No.</u>	<u>Name</u>	<u>email</u>	<u>Title</u>	<u>Program</u>	<u>Remarks</u>
1.	Adhip Agarwala	adhip	Topological Phases of Matter	BS(556/557/558)	Open to all student
2.	Aditya Kelkar	akelkar	Ion collision based molecular spectroscopy	MSPD(501/502)	Open to all student
3.	Amit Kumar Agarwal	amitag	Charge, spin and orbital transport in topological and quantum materials	MSPD(501/502)	Student is already selected
4.	Apratim Kaviraj	akaviraj	Conformal field theories and critical pheomena	Any	Open to all student
5.	Arijit Kundu	kundua	Topological systems in condensed matter	Any	Open to all student
6.	Arjun Bagchi	abagchi	String theory and quantum field theory	MS-MSc(563/565)	Student is already selected
7.	Anjan Gupta	anjankg	Fabrication & optimization of MoS ₂ & other 2D material STM tunneling current induced electro-luminescence from 2D semiconductors Fabrication & characterisation of Nb based SIS Josephson Junction.	Any	Open to all student
8.	Chanchal Sow	chanchal	Structure, magnetism and transport in Quantum material heterostructures	MSPD(501/502)	Open to all student
9.	Chandrima Banerjee	cbanerjee	Micromagnetic Simulation on Magnons	MSPD(596/598/696/698)	Open to all student
10.	Debtosh Chowdhury	debtoshc	1. Cosmology 2. Particle Physics	MS-MSc(563/565)	Open to all student
11.	Diptarka Das	didas	Non-equilibrium physics	BS(556/557/558)	Continuing student
12.	Gopal Hazra	hazra	Exoplanet Atmosphere, Atmospheric Escape from Exoplanets, Radio Emission from Jupiter	Any	Open to all student
13.	Harshwardhan Wanare	hwanare	Polarization Optics: Scattering to Microscopy	Any	Open to all student
14.	Jayita Nayak	jnyayak	Single crystal of topological materials and study of magneto transport properties	MSPD(501/502)	Open to all student
15.	Joydeep Chakraborty	joydeep	Heat Kernel Method in Field Theory	Any	Open to all student
16.	K P Rajeev	kpraj	Low energy nuclear reactions	Any	Open to all student

17.	Kaushik Bhattacharya	kaushikb	Gravitational collapse in presence of scalar fields	MS- MSc(563/565)	Open to all student
18.	Koushik Pal	koushik	Quantum condensed matter theory, electronic structure theory, quantum simulations, materials informatics, machine learning	MSPD(596/59 8/696/698)	Open to all student
19.	Mahendra K Verma	mkv	Astrophysical Turbulence	MS- MSc(563/565)	Open to all student
20.	Manas Khan	mkhan	Nonequilibrium phenomena in colloidal and biological systems	MS- MSc(563/565)	Open to all student
21.	Navaneeth Poonthottathil	navaneeth	Experimental neutrino physics	BS(556/557/ 558)	Open to all student
22.	Nilay Kundu	nilayhep	Aspects of black hole physics and/or cosmology (A basic knowledge of GR may be useful)	MSPD(501/ 502)	Open to all student
23.	Rajeev Gupta	guptaraj	Experimental Investigations on vanadates	MS- MSc(563/565)	Open to all student
24.	Rohit Medwal	rmedwal	Magnetization dynamics at Ferromagnet/Heavy Metalhetero-interfaces Spin orbit enhanced magneto- transport Spin to charge conversion at ferromagnet/heavy metal hetero-interfaces Magnto-plasmonics	Any	Open to all student
25.	Sabyasachi Chakraborty	sabyac	Renormalization group effects in first-order phase transition	Any	Student is already selected
26.	Sagar Chakraborty	sagarc	Evolutionary Game Theory and Nonlinear Dynamics	Any	Open to all student
27.	Saikat Ghosh	gsaikat	Quantum-enhanced measurements with atoms and cavities	MS- MSc(563/565)	Open to all student
28.	Sanmay Ganguly	sanmay	High Energy Physics and Machine Learning	MS- MSc(563/565)	Open to all student
29.	Sapam Ranjita Chanu	sranjita	Quantum technologies with atoms, ions, electronics	Any	Open to all student
30.	Satyajit Banerjee	satyajit	Growth of low dimensional superconductors and studying their properties	MSPD(596/59 8/696/698)	Open to all student
31.	Sivasurender Chandran	schandran	Active Glasses	MSPD(501/ 502)	Student is already selected

32.	Soumik Mukhopadhyay	soumikm	Topological spintronics	MS-MSc(563/565)	Open to all student
33.	Sudeep Kumar Ghosh	skghosh	Topological Superconductivity, Nonequilibrium response of superconductors	Any	Open to all student
34.	Sudipta Dubey	sudiptad	2d material	MSPD(501/502)	Open to all student
35.	Supratik Banerjee	sbanerjee	Space and astrophysical turbulence, turbulence in living fluids	Any	Open to all student
36.	Sudeep Bhattacharjee	sudeepb	Measurement and control of plasma beta in a plasma confined by a dipole magnetic field. Experiments and modeling on the generation of plasmas at cryogenic temperatures. Measurements of collisionally broadened ion cyclotron resonance in atmospheric pressure plasmas in a magnetic field. Micro-structures and atomically heterogeneous systems created by low energy ion beam irradiation of metallic surfaces, and their field emission properties	Any	Open to all student
37.	Swagata Mukherjee	swagata	High energy physics, experimental	Any	Student is already selected
38.	Tapobrata Sarkar	tapo	Numerical methods in astrophysical phenomena and general relativity	MSPD(501/502)	Open to all student
39.	Tarakanth Mandal	tarakanth	Development of coarse-grained model for polymers	MS-MSc(563/565)	Open to all student
40.	Tarun Kanti Ghosh	tkghosh	Topology and transport properties in condensed matter systems (theory)	MS-MSc(563/565)	Open to all student
41.	Venkata Jayasurya Yallapragada	jayasurya	Computational nanophotonics	Any	Open to all student
42.	Vijaya R	rvijaya	Micro-nano photonics	Any	Open to all student
43.	Zakir Hossain	zakir	Superconductivity and Magnetism (single crystal, thin film)	Any	Open to all student