

List of Projects for 2024-25 2nd semester

| S.no. | Name | Email ID | Title | Program | Remarks |
|-------|----------------------|-----------|--|-----------------------|-----------------------------|
| 1 | Adhip Agarwala | adhip | Anyons | BS(555/556) | Student is already selected |
| 2 | Aditya Kelkar | akelkar | Accelerator based atomic physics | MSPD(501/502) | Open to all student |
| 3 | Amit Kumar Agarwal | amitag | Spintronics and orbitronics | Any | Open to all student |
| 4 | Anand Kumar Jha | akjha | Quantum imaging and entanglement | MS-MSc(566/568) | Open to all student |
| 5 | Anjan Kumar Gupta | anjankg | 2D materials | Any | Continuing student |
| 6 | Apratim Kaviraj | akaviraj | Nonperturbative techniques | MSPD(597/697/599/699) | Continuing student |
| 7 | Arijit Kundu | kundua | Understanding quantum geometry in time-dependent systems. Plan is to use CFT. | Any | Open to all student |
| 8 | Arjun Bagchi | abagchi | String theory, quantum field | MS-MSc(566/568) | Continuing student |
| 9 | Chanchal Sow | chanchal | Novel Quantum Materials: Single crystal and thin film growth | Any | Open to all student |
| 10 | Chandrima Banerjee | cbanerjee | Spin Dynamics in Magnetic | MS-MSc(566/568) | Continuing student |
| 11 | Debtosh Chowdhury | debtoshc | Electroweak Precision Observables in Beyond the Standard Model Physics | BS(555/556) | Continuing student |
| 12 | Dipankar Chakrabarti | dipankar | QCD | M.Sc | Continuing Student |
| 13 | Diptarka Das | didas | 1. Statistical Mechanics for Neural scaling laws. 2. Non-equilibrium dynamics | Any | Open to all student |
| 14 | Gautam Sengupta | sengupta | High Energy Physics | MSPD(501/502) | Continuing student |
| 15 | Gopal Hazra | Hazra | Atmosphere of terrestrial Exoplanets | Any | Open to all student |
| 16 | Jayita Nayak | jnyayak | Electronic and magneto transport investigation of Kagome materials | MS-MSc(566/568) | Open to all student |

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| 17 | Joydeep Chakraborty | joydeep | Two students are already pursuing their projects with me. They will continue for the next semester as well. | Any | Student is already selected |
| 18 | Koushik Pal | koushik | Machine learning, materials informatics, topological phases, transport properties, density functional theory | MSPD(597/697/599/699) | Student is already selected |
| 19 | Mahendra K Verma | mkv | Astrophysical turbulence | MS-MSc(566/568) | Open to all student |
| 20 | Manas Khan | mkhan | Active Brownian dynamics and non-equilibrium fluctuations | MSPD(597/697/599/699) | Open to all student |
| 21 | Navaneeth Poonthottathil | navaneeth | Experimental Neutrino Physics | Any | Open to all student |
| 22 | Nilay Kundu | nilayhep | Continuing Project student in aspects of black hole physics. | Any | Student is already selected |
| 23 | Rajeev Gupta | guptaraj | Experimental investigations | MS-MSc(566/568) | Open to all student |
| 24 | Rohit Medwal | rmedwal | Magneto-transport and Quantum Magnonics | Any | Open to all student |
| 25 | Sabyasachi Chakraborty | sabyac | Theoretical Particle Physics | Any | Student is already selected |
| 26 | Sagar Chakraborty | sagarc | Nonlinear Dynamics and Evolutionary Games | Any | Open to all student |
| 27 | Sanmay Ganguly | sanmay | High Energy Physics and Machine Learning | MS-MSc(566/568) | Open to all student |
| 28 | Sapam Ranjita Chanu | sranjita | Quantum circuits and control | Any | Open to all student |
| 29 | Satyajit Banerjee | satyajit | Superconductivity and magnetism. MSc-PhD dual degree student will be | MSPD(597/697/599/699) | Continuing student |
| 30 | Sivasurender Chandran | schandran | Polymer Dynamics in Nonequilibrium Conditions | MSPD(501/502) | Open to all student |

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| 31 | Soumik Mukhopadhyay | soumikm | 1) Interplay of topology and magnetism in solids; 2) Topological Hall effect in van der waals crystals; 3) Quantum Anomalous Hall effect; 4) Electrical transport in van der Waals heterostructures; 5) Topological spintronics | Any | Open to all student |
| 32 | Subramaniam Anantha Ramakrishna | sar | Optics, Micro/nanostructured materials | MS-MSc(566/568) | Open to all student |
| 33 | Sudeep Bhattacharjee | Sudeepb | Experimental plasma physics | Any | Open to all student |
| 34 | Sudeep Kumar Ghosh | skghosh | Condensed matter theory: Unconventional and topological superconductivity, Quantum mechanics in hyperbolic space | MSPD(597/697/599/699) | Open to all student |
| 35 | Sudipta Dubey | sudiptad | 2D material experiment | MSPD(501/502) | Open to all student |
| 36 | Supratik Banerjee | sbanerjee | Active fluids, plasma astrophysics, magnetohydrodynamics | Any | Open to all student |
| 37 | Swagata Mukherjee | swagata | Search for physics beyond the standard model in hadron colliders | Any | Continuing student |
| 38 | Tapobrata Sarkar | tapo | Astrophysical phenomena (computation based) | MSPD(501/502) | Student is already selected |
| 39 | Taraknath Mandal | taraknath | Computational Soft matter and Biophysics | MS-MSc(566/568) | Open to all student |
| 40 | Tarun Kanti Ghosh | tkghosh | Topology and transport properties in Dirac materials | Any | Open to all student |
| 41 | Venkatajaya surya | jayasurya | Computational optics/ photonics | MS-MSc (566/568) | Open to all student |
| 42 | Vijaya R | rvijaya | Experimental photonics | MSPD (501/502) | Open to all student |
| 43 | Zakir Hossain | zakir | Condensed Matter Physics | MS-MSc (566/568) | Student is already selected |