IISER Kolkata Post Doctoral Fellowship Programme

10 Positions available at Department of Physical Sciences(DPS)

Prospective hosts:

1. **Siddhartha Lal:** Strongly Correlated Electron Systems, Quantum Magnetism, Topological States of Matter, Non-Fermi Liquids, Unconventional Superconductivity, Many-Particle Entanglement
2. **Amit Ghosal :**The interplay of inter-particle interaction, inhomogeneity from disorder and topological effects in the correlated quantum and classical matter
3. **Satyabrata Raj:** Electronic, Optical and Magnetic structure of 2Dand 3D-strongly correlated systems by Density Functional Theory (DFT) approach
4. **Bipul Pal:** Spectroscopic study of novel 2D materials
5. **Pradeep Kumar Mohanty:** Nonequilibrium dynamics
6. **Goutam Dev Mukherjee:** High Pressure Studies on quantum materials
7. **Rumi De:** To develop theoretical and computational models to understand the collective dynamics of active, out-of-equilibrium systems by using the tools from statistical mechanics, nonlinear dynamics, and soft condensed matter physics.
8. **Supratim Sengupta:** Evolutionary Game Theory and Statistical Learning: To develop theoretical and computational models to understand the effect of learning on the evolution of cooperation and other social phenomena by using the tools from statistical mechanics, statistical learning theory and graphical models. The candidate should have a background in one or more of the following areas: statistical mechanics, analysis of complex networks, evolutionary game theory (preferred but not essential) and should have a strong aptitude for computer simulations with knowledge of Monte Carlo methods. The area of research lies at the interface of statistical physics of complex social phenomenon and cognitive science.

9. **Dibyendu Nandi, Golam Mortuza Hossain, Koushik Dutta, Narayan Banerjee, Rajesh Kumble Nayak, Sudip Kumar Garain:** Star-planet interactions, Magnetohydrodynamics, and radiative transfer to understand stellar activity and dynamics around compact objects. Solar Physics. Quantum field theory in curved spacetime and its astrophysical implications. Gravitational waves (LIGO).Early and late-time cosmology, its observational implications, and connections to particle physics.
10. **Ayan Banerjee:** a) Biophotonics using waveguides and Raman optical tweezers, b) non-equilibrium statistical mechanics using optical tweezers, c) optical trapping in air (candidates with expertise in a), b) or c) may apply).
11. **Dhananjay Nandi:** Experimental molecular dynamics in electron collisions with gas phase molecules using state-of-the-art spectroscopic techniques
12. **Arindam Kundagrami:** Theoretical Polymer Physics and Soft Condensed Matter Physics
13. **Rangeet Bhattacharyya:** Non-equilibrium dynamics of open quantum systems
14. **Anandamohan Ghosh:** Random matrix theory

Faculty profiles are available at the DPS website

Important Dates:

Application deadline: 31st MARCH 2024

Announcement of Shortlisted Candidates: 5th APRIL 2024

Interview: Exact date and time will be communicated by prospective host to shortlisted candidates

APPLY ONLINE at https://apply.iiserkol.ac.in/application/

Contact Details: For any query please contact dps.office@iiserkol.ac.in and/or the prospective host you would like to work with.