

PhD Admission 2026-2027 Physics and Applied Mathematics



Indian Statistical Institute (ISI)

Thrust Research Areas

1. Classical & Quantum Gravity

Properties of compact objects, modified gravity, black holes, String Cosmology, (Loop) Quantum Gravity, Fundamental Theory, QFT in curved space

2. Quantum Foundations & Quantum Information

Quantum Resource Theory, Quantum Cryptography, Quantum Entanglement, Quantum Nonlocality, Quantum Networks

3. Theoretical Condensed Matter Physics

Theoretical Nanoscience, Thermoelectricity, Driven Quantum Systems, Many-body Physics, Spintronics, Strongly Correlated Systems, Topological Condensed Matter

4. Nonlinear Dynamics

Chaos, Bifurcation, Synchronization, Complex Networks, Chimera States, Extreme Events, Swarms, Evolutionary Game Theory, Active-matter Physics

5. Experimental Fluvial Mechanics

Turbulence in Open Channel, Fluvial Hydraulics, Turbulent Bursting, Double-averaging Methodology, Turbulent Flow Measurement, Seepage Flow

6. Cosmology & Astroparticle Physics

CMB, Dark Energy, Dark Matter & Neutrino Cosmology, 21-cm Cosmology, Gravitational Wave Cosmology, Tensions in Cosmological Datasets

7. Complex Systems, Regime Shifts & Predictive Modelling

Population & ecosystem dynamics, Dynamical systems, Bifurcations, Regime shifts, Early warning signals, Change-point detection, Hybrid mechanistic + ML time-series modelling, Causal inference, Forecasting

8. Electromagnetic Theory for Radar Polarimetry

Scattering Theory, Polarimetric Decomposition Techniques, Target Characterization and Classification, Bistatic and Multistatic Polarimetry, Modeling for SAR Polarimetry

1 to 6 will be offered by PAMU, ISI, Kolkata; 7 will be offered by AERU, ISI, Kolkata; 8 will be offered by TASU, ISI, Tezpur

Essential Qualifications

Master degree or equivalent in Physics/Mathematics/Applied Mathematics/Statistics.

OR, M.E./M. Tech. degree or equivalent with Mathematics/Physics as a subject.

Admission Modes

Institute Funded Fellowship Period: 6+1 yrs.

Apply online through <https://www.isical.ac.in/~admission>
Applicants should apply under JRF, "Physics & Applied Mathematics"
from 12th February, 2026 to 13th March, 2026
Admission Test : 10th May, 2026

Externally Funded (UGC-CSIR NET & INSPIRE JRF)

Apply to pamuapplication@gmail.com as per format described at
<https://www.isical.ac.in/~pamu/category/advertisement/current-advertisement>
Last Date : 29th May, 2026



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