S N BOSE NATIONAL CENTRE
FOR BASIC SCIENCES
Block JD, Sector III, Salt Lake, Kolkata 700 106

DEPARTMENTAL SEMINAR

Department of Astrophysics and High Energy Physics

12th February, 2026 **3.00 pm** **FERMION / ONLINE**

SPEAKER

Dr. Amit Rai, Associate Professor, School of Physical Sciences, Jawaharlal Nehru University

TITLE OF THE TALK

Quantum Effects in Photonic Waveguide Systems

ABSTRACT

In recent years, lattices composed of evanescently coupled optical waveguides have emerged as versatile platforms for the investigation of a wide range of quantum phenomena. A principal advantage of these systems lies in the ability to engineer and control interactions through careful structural design. Furthermore, the initial conditions of light propagating through the waveguide array can be precisely prepared and manipulated. These photonic structures also exhibit exceptionally low decoherence rates, even over extended propagation distances. In this presentation, we will review several key aspects of our research on optical waveguide arrays.

HOST FACULTY
Prof. Archan S Majumdar
Dept. of ASTROPHYSICS AND HIGH ENERGY PHYSICS
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