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

DEPARTMENTAL SEMINAR

Theoretical Sciences

05th July, 2022 **11.30 AM** **ONLINE / FERMION**

SPEAKER

Dr. DEBASISH CHAUDHURI,
Associate Professor G, INSTITUTE OF PHYSICS, BHUBNESWAR

TITLE OF THE TALK

Active matter: from single particle trajectory to collective behavior

ABSTRACT

Active Brownian particles perform persistent motion. We shall discuss how their trajectories in the presence of translational diffusion show exact mapping to an extensible semiflexible filament. Using exact calculations and numerical simulations we shall illustrate their dispersion, impact of speed fluctuations and confinement. Their many body properties are determined by alignment and repulsion, leading to an activity-dependent re-entrant phase separation.

HOST FACULTY

Dr. Sunandan Gangopadhyay and Dr. Urna Basu
DEPT. OF THEORETICAL SCIENCES
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