INDIAN ASSOCIATION FOR THE CULTIVATION OF SCIENCE
2A & 2B, Raja S.C. Mullick Road, Jadavpur, Kolkata-700032, India

Seminar Notice

Org. by

School of Physical Sciences

Title:	**Dissipation-induced phases in Floquet systems**
Speaker:	**Sthitadhi Roy, Oxford University, UK**
Date:	**April 16, 2019 (Tuesday)**
Time:	**3:00 p.m.**
Venue:	**Physics Seminar Room - C406,3rd Floor, Centenary Building, IACS**
Abstract:	We investigate the conditions under which periodically driven quantum systems subject to dissipation exhibit a stable subharmonic response. Noting that coupling to a bath introduces not only cooling but also noise, we point out that a system subject to the latter for the entire cycle will generically lose coherence of the subharmonic oscillations, and thereby the long-time temporal symmetry breaking. We provide an example of a two-dimensional system which does not suffer from this and therefore displays persistent subharmonic oscillations stabilised by the dissipation. We also show that this is fundamentally different from the disordered discrete time crystal previously found in closed systems, both conceptually and in its phenomenology.

All are cordially invited to attend the seminar