



INDIAN ASSOCIATION FOR THE CULTIVATION OF SCIENCE

2A & 2B, Raja S. C. Mullick Road, Jadavpur, Kolkata-700 032

School of Physical Sciences

SEMINAR NOTICE

- Title** : **Simulating lattice gauge theories in and out of equilibrium**
- Speaker** : **TITAS CHANDA, *The Abdus Salam International Centre for Theoretical Physics (ICTP), Trieste, Italy.***
- Date** : **August 29, 2022 (Monday)**
- Time** : **15:00 hours (IST)**
- Venue** : **Online Mode using Zoom Platform**
Zoom link of the seminar:
<https://zoom.us/j/97021270635>
Meeting ID: 970 2127 0635
Passcode: 259853

Abstract:

Quantum simulations (QS) with ultra-cold atoms on optical lattices constitute one of the most matured branch of quantum technologies, that deliver a perfect playground to investigate strongly-correlated phases of many-body systems under controllable experimental conditions. On the other hand, in the domain of classical simulations, recent advancements in tensor network (TN) techniques have enabled us to analyze various models of quantum many-body physics with efficiency and accuracy. Although both QS and TN are mainly focussed on low-energy physics, it has become increasingly clear that simulations of high-energy physics, in particular lattice gauge theories, either on a table-top experiment or on a classical computer without any sign problem, is a near-future possibility.

All are cordially invited to attend the seminar