



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 :** Exploring strongly interacting matter for small quark masses.
- Speaker :** Dr. Anirban Lahiri, Fakultät für Physik, Universität Bielefeld, Germany
- Date :** August 25, 2022 (Thursday)
- Time :** 15:00 hours (IST)
- Venue :** Online Mode using Zoom Platform
Zoom link of the seminar:
<https://zoom.us/j/95121280547>
Meeting ID: 951 2128 0547
Passcode: 380066

Abstract:

Exploration of the phases of the strongly interacting matter under extreme conditions has been a topic of immense discussion over the last decades. Attempts have been made both from theoretical and experimental work fronts like ALICE@LHC, STAR@RHIC and CBM@FAIR, and plenty of others, to understand the phases and transitions between them. Chiral symmetry breaking and confinement are the two most important effects in the non-perturbative domain of Quantum Chromodynamics (QCD) which is the field-theoretic description of the strongly interacting matter. In this talk, I will discuss the features of QCD towards the vanishing value of light quark masses, the so-called chiral limit. Starting with an introduction to the QCD phases in the physical world I will continue with some new results towards the chiral limit calculated using the lattice framework of QCD and discuss various salient features related to the critical behavior that can be realized through our latest calculations.

All are cordially invited to attend the seminar!