

INDIAN ASSOCIATION FOR THE CULTIVATION OF SCIENCE

2A & 2B, Raja S.C. Mullick Road, Jadavpur, Kolkata-700032, India

IACS Institute Colloquium in Physical Sciences

Date and Time: March 13, 2020 (Friday), from 4 pm

Venue: C V Raman Hall, IACS, Kolkata

Speaker: Professor Amitava Raychaudhuri (University of Calcutta)

Title: Neutrinos: Mass models and their interconnections with other open issues

Abstract: Neutrino oscillation results have given us a picture of their masses and three mixing angles. Unlike in the quark sector, some mixing angles in the lepton sector are large. However, this is not the complete story. There are several small quantities too. For example, θ_{13} is small compared to θ_{12} and θ_{23} , the deviation of θ_{23} from $\pi/4$ is small, and the solar mass splitting is two orders smaller than the atmospheric one. Neutrino mass models with discrete flavour symmetries are often invoked to recover these features. Such models are testable in the upcoming experiments. Moreover, the new particles which these models incorporate have a bearing on other open issues in (astro)particle physics. In this talk we intend to give a broad overview of our present understanding of this area.

All are cordially invited to attend the Colloquium