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:	Understanding R(D^*,D) Anomaly
Speaker:	**Bhaskar Dutta,Texas A & M University, USA**
Date:	**December 21, 2018 (Friday)**
Time:	**3:30 p.m.**
Venue:	**Physics Seminar Room - C406,3rd Floor, Centenary Building, IACS**
Abstract:	In this talk, I will discuss a theory for the R(D*) and $R(D)$ anomaly in terms of a low mass W_R gauge boson of a class of left-right symmetric models. These models, which are based on the gauge symmetry SU(3)_c x SU(2)_L x SU(2)_R x U(1)_{B-L}, utilize vector-like fermions to generate quark and lepton masses via a universal seesaw mechanism. I will discuss both a parity symmetric as well as an asymmetric version. A light sterile neutrino emerges naturally in this setup, which allows for new decay modes of B-meson via right-handed currents. We show that these models can explain R(D*) and R(D) anomaly while being consistent with LHC and LEP data as well as low energy flavor constraints arising from various meson mixings, but only for a limited range of the W_R mass: 1.2, (1.8) TeV< M{W_R}< 3 TeV for parity asymmetric (symmetric) Yukawa sectors. The light sterile neutrinos predicted by the model may be relevant for explaining the MiniBoone and LSND neutrino oscillation results.

All are cordially invited to attend the seminar