

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

Seminar Notice

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School of Physical Sciences

Title:	Two-Component Dark Matter and Neutrino Mass in gauged $U(1)_{B-L}$ Model.
Speaker:	Dibyendu Nanda, IIT Guwahati
Date:	January 2, 2020 (Thursday)
Time:	15:00 Hours
Venue:	Physics Seminar Room (C406), 3rd Floor, Centenary Building, IACS
Abstract:	We have proposed gauged $U(1)_{B-L}$ extension of the Standard Model, which naturally predicts a two-component Dirac fermion dark matter scenario due to the requirements of anomaly cancellation. Due to the non-minimal charge assignment of the new fermionic fields, both the dark matter becomes naturally stable by virtue of a remnant $Z_2 \times Z_2^{\prime}$ symmetry, without any ad-hoc symmetries. In such models, the light neutrino mass can also be realized in various ways depending on the presence of the new fermions. These models can be constrained from all relevant experiments as well as cosmological observations like BBN or CMB.

All are cordially invited to attend the seminar