Tata Institute of Fundamental Research

Homi Bhabha Road, Colaba, Mumbai, INDIA, 400005

ASET Colloquium

Precision neutrino oscillation physics with DUNE

Neutrino oscillations have been observed using neutrinos produced in the atmosphere, in the sun, in nuclear reactors, and in particle accelerators. Over the past two decades, nearly all of the parameters governing oscillations have been measured experimentally, but the remaining open questions have very interesting consequences. Using over 40,000 tons of liquid argon in a South Dakota gold mine, the Deep Underground Neutrino Experiment will search for CP-violation in the neutrino sector, which would cause a subtle difference in the oscillation patterns of neutrinos and antineutrinos and could be the key to understanding why there is so little antimatter in the universe.

Dr. Christopher Marshall, LBNL, USA

Chris Marshall is a Chamberlain Fellow at the Lawrence Berkeley National Laboratory in Berkeley, California. As a member of the DUNE collaboration, he co-active in the design and optimization of the near detector. He is also a member of the Daya Bay collaboration. From 2010-2016, he worked on the MINERvA neutrino-nucleus cross section experiment, and received his Ph.D. from the University of Rochester in 2016.

Date & Time: Friday, 28th February 2020, 3:30pm

Venue: Main Lecture Theatre (AG-66), TIFR, Mumbai

This talk is open to all, no registration needed. Please carry your photo ID card. For further details, please email to 'aset@tifr.res.in' or call +91-9987537702.