

TATA INSTITUTE OF FUNDAMENTAL RESEARCH

Homi Bhabha Road, Mumbai-400 005

October 22, 2018

ASET Colloquium

- Speaker** : Prof. Stefan Söldner-Rembold (*University of Manchester, UK*)
- Title** : DUNE – a global neutrino experiment
- Date & Time** : Friday 02 November 2018 at 16:00 hrs.
- Venue** : Lecture Theater (AG-66)

Abstract :

The Deep Underground Neutrino Experiment (DUNE) will be an international observatory for neutrino science, designed, constructed and operated by a global collaboration of scientists. Primary science drivers are the discovery of CP violation in the neutrino sector, the detection of neutrinos from supernovae, and the search for baryon number violation. DUNE will consist of two neutrino detectors placed in the world's most intense neutrino beam. A near detector will record particle interactions near the source of the beam at Fermilab close to Chicago. A second, much larger, far detector operating with more than 40 kt of liquid-argon will be installed a mile underground in South Dakota. Several mid-size liquid-argon detectors at Fermilab and CERN are being constructed to demonstrate the potential of the cutting-edge liquid-argon technology employed for DUNE. I will introduce the technology and give an overview of the current status, including first ProtoDUNE results, and discuss the future discovery potential of the DUNE programme.

About the Speaker:

Stefan Söldner-Rembold is Professor of Particle Physics at the University of Manchester and co-Spokesperson of the DUNE Collaboration. He graduated from the University of Bonn in 1987 and received his doctorate from the Technical University of Munich in 1992, working at the Max Planck Institute and Fermilab. He worked at the University of Freiburg from 1992 to 1999, where he received his Habilitation in 1996. He held a Heisenberg Fellowship from 1999 to 2003 and joined the faculty of the University of Manchester in 2003, where he is now Head of the Particle Physics group. He was Spokesperson of the D0 Collaboration at the Tevatron from 2009 to 2011, and also served as Physics Coordinator of the D0 Collaboration and of the OPAL Collaboration at LEP. Stefan is a fellow of the American Physical Society and of the Institute of Physics (IoP) in the UK. He received a Royal Society Wolfson Research Award in 2013 and the IoP's Chadwick Medal and Prize in 2018.



Dr. Satyanarayana Bheesette
(Coordinator, ASET Forum)