

## Francesco Terranova

Milano Bicocca University & INFN

## The science and detector challenge of DUNE

## Abstract

The Deep Underground Neutrino Experiment (DUNE) is the most ambitious next generation experiment for the study of neutrino oscillations with accelerator beams. It provides a rich science program exploiting both artificial and natural neutrino sources. In this seminar, we will review the science of DUNE and the technology choices that drive the physics reach for neutrino oscillations, the detection of supernovae neutrino bursts and the search for proton decay. Special emphasis will be given to the results of the DUNE demonstrator at CERN (ProtoDUNE) and the development of the photon detection system in view of the Run II of ProtoDUNE and the construction of the first 10 kton module at the Sanford Underground Research Facility.

## January 9, 2018 - h 14:30 pm LNGS - "B. Pontecorvo" room https://agenda.infn.it/e/terranova