



NITheP cordially invites you to a seminar by

Professor Ashok Goyal
University of Delhi, India

Date: Friday, 22nd February 2019

Time: 11h30 -12h30

Venue: NITheP Seminar Room, 3rd Floor, H-Block

Title: Dark Matter Detection, Models and Constraints

Abstract: Existence of dark matter has been inferred from its large scale gravitational interactions at various astrophysical and cosmological scales. There is no evidence as yet of non-gravitational interaction of dark matter with the SM particles. The nature of dark matter particles remains unknown. Search strategies to unravel its properties will be reviewed. The search strategies involve looking for the DM signals in 1) Direct detection of nucleon recoil in underground laboratories in DM-nucleon elastic scattering. 2) Indirect detection in pair creation and cherekov telescopes on satellites. 3) Collider searches which aim at identifying signatures of DM production at high energy accelerators such as LHC. Several dark matter models are reviewed and the constraints on the model parameters from experimental data discussed.