

ore 12.00 : Seminario del vincitore della procedura selettiva RTDA - SSD FIS/02 SC 02A2- Dr. Marco Bonvini

Titolo: A new frontier of precision at LHC and future colliders

Abstract: Precision phenomenology at LHC requires precise theoretical predictions, which is a challenge due to the strong interactions governing the collision of protons. The computations of many orders in perturbation theory is not always sufficient to increase the theoretical precision,

due to the potential presence of logarithmically enhanced contributions that invalidate the perturbative expansion.

I will consider the resummation of a class of such contributions, the so-called high-energy (or small- x) logarithms, which dramatically improves the description of the legacy deep-inelastic scattering data collected by the HERA collider.

I will then show the impact of high-energy resummation on the phenomenological predictions at LHC and future colliders. I will conclude with future plans and prospects.