



Venerdì 4 Marzo
Aula Wataghin, ore 14:30

Lorenzo Magnea
(Università di Torino)

Perturbative QCD for LHC Physics

We all hope that LHC will be a 'New Physics Machine'. We know with certainty, however, that it is a 'QCD machine': the overwhelming majority of LHC events is QCD-dominated. In order to understand possible new physics scenarios, we need to master QCD effects with an unprecedented degree of precision. This challenge, together with some new theoretical insights, has generated massive progress in our understanding of perturbative QCD, and in the efficiency of the calculational tools that are needed at LHC. I will review some of this recent progress, touching upon the physics of QCD jets, the determination of parton distributions, new techniques for NLO calculations, and new results concerning the structure of infrared and collinear singularities to all orders in perturbation theory.