Venerdì 13 Maggio
Aula Wataghin, ore 14:30

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Supersymmetric particle production and dark matter annihilation: an effective field theory perspective

Electroweak symmetry breaking and dark matter are arguably the most compelling observations requiring yet undiscovered particles. LHC and astrophysical experiments are now prepared to address this question. If the new particles are heavy, quantum corrections to their production and annihilation may become exceedingly large.
I discuss how effective field theory methods familiar from quantum chromodynamics at low energies can be applied to obtain precise results. I present results on squark production and neutralino annihilation in the supersymmetric extension of the standard model.