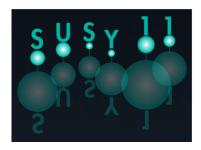
Supersymmetry 2011 (SUSY11)



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Quarks and Leptons as Nambu-Goldstone Fermions Under E_7/SO(10)

Thursday, 1 September 2011 15:30 (20 minutes)

The hierarchy of the Yukawa couplings is an outstanding problem of the standard model. We present a class of models in which the first and second generation fermions are SUSY partners of pseudo-Nambu-Goldstone bosons that parameterize an $E_7/SO(10)$ Kahler manifold, explaining the small values of these fermion masses relative to those of the third generation. We consider experimental constraints on this scenario, and find that the simplest model with universal gaugino masses is already ruled out by the LHC. However, models with non-universal gaugino masses will likely be excluded only by direct dark matter searches.

Presenter: Dr MANDAL, Sourav (IPMU, Univ. of Tokyo)

Session Classification: Parallel Session 9