Goldstone Gauginos

Dirac Gauginos are an attractive alternative to the MSSM. They have smaller radiative corrections to the Higgs soft masses, a suppression of certain colored production processes at the LHC, and ameliorated flavor constraints. Previous attempts to implement Dirac Gauginos however generically featured tachyons that could break the SM gauge symmetries. Removing those tachyons from the theory inevitably spoiled the positive properties of Dirac Gauginos. I will present a simple mechanism that realizes Dirac Gauginos and eliminates the tachyonic states. Finally, I will discuss a natural realization of this mechanism in SUSY QCD.

Wednesday, March 4, 2015
2:00pm
401 Physical Sciences Building