

Naturalness, Higgs Couplings, and Higgsino Decays

Tuesday

October 14

4 P.M.

Rm 415 NSH

Dr. Bibhushan Shakya
Research Fellow, University of Michigan

Naturalness of weak-scale supersymmetry has become an important concern following the discovery of a 126 GeV Standard-Model-like Higgs and lack of evidence for superpartners close to the weak scale. In this talk I will discuss the compatibility of these observations in the context of the lambda-SUSY model, an extension of the NMSSM where a large coupling (λ) between the singlet and doublet sectors naturally allows for heavy higgs bosons and superpartners. A characteristic feature of these models is higgsinos decaying into a singlino; a search strategy for this process will also be discussed.