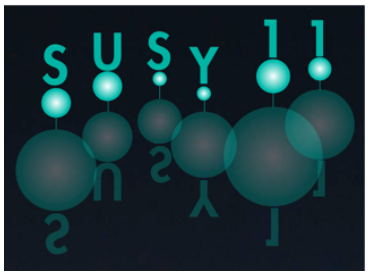

Contribution ID: **325** Type: **not specified**

A New Yukawa Unified SUSY Scenario

Sunday, 28 August 2011 14:30 (20 minutes)

Supersymmetric SO(10) Grand Unified Theories with Yukawa unification represent an appealing possibility for physics beyond the Standard Model. However Yukawa unification is made difficult by large threshold corrections to the bottom mass. Generally one is led to consider models where the sfermion masses are large in order to suppress these threshhold corrections. Here we present another possibility, in which the top and bottom GUT scale Yukawa couplings are equal to a component of the charged lepton Yukawa matrix at the GUT scale in a basis where this matrix is not diagonal. Diagonalizing this matrix introduces mixing in the neutrino sector. Specifically we find a region of parameter space with relatively light sparticles, and which has not been ruled out by current LHC or other data, the mixing induced in the neutrino sector is such that sin^2 \Theta_{23} \approx 1, in agreement with data.

Presenter: Dr GAINER, James (Argonne National Laboratory/ Northwestern University)

Session Classification: Parallel Session 2