



Contribution ID: 331

Type: not specified

## Gauge Coupling Unification in Heterotic String Models with Gauge mediated SUSY breaking

*Sunday, 28 August 2011 15:50 (20 minutes)*

We calculate the weak scale MSSM spectrum starting from a heterotic string theory compactified on an anisotropic orbifold. Supersymmetry breaking is mediated by vector-like exotics that arise naturally in heterotic string theories. The messengers that mediate SUSY breaking come in incomplete GUT multiplets and give rise to non-universal gaugino masses at the GUT scale. Models with non-universal gaugino masses at the GUT scale have the attractive feature of allowing for precision gauge coupling unification at the GUT scale with negligible contributions from threshold corrections near the unification scale. The unique features of the MSSM spectrum are light gluinos and also large mass differences between the lightest and the next-to-lightest neutralinos and charginos which could lead to interesting signatures at the colliders.

**Presenter:** Ms ANANDAKRISHNAN, Archana (The Ohio State University)

**Session Classification:** Parallel Session 2