



Contribution ID: 294

Type: not specified

A perfect match of MSSM-like orbifold and resolution models via anomalies

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

Compactifications of the heterotic string on toroidal orbifolds has shown to be a very promising setup for constructing unifying models which contain the MSSM spectrum and have many realistic properties. However, the target space dynamics of such models drives them slightly away from the orbifold point in moduli space which resolves the curvature singularities and makes the string computations difficult. Now in the large volume regime one can perform calculations with the supergravity approximation, which is conjectured to be connected to the orbifold model. We focus on an MSSM-like model on the orbifold and its blowup counterpart. Using local properties, we find a perfect matching on the level of the chiral spectrum and of the anomalies which in both cases are cancelled by the four dimensional Green-Schwarz mechanism. This allows us to identify the redefinitions of chiral fields, axions and the anomaly polynomial that occur in the blowup process and to get an insight into the properties of Yukawa couplings.

Presenter: Dr BLASZCZYK, Michael

Session Classification: Parallel Session 2