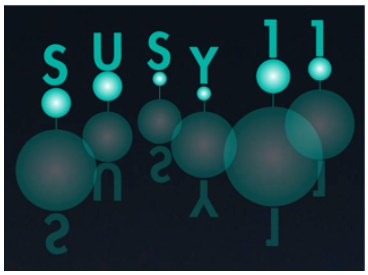

Contribution ID: **296** Type: **not specified**

On Noncompact Heterotic Nonlinear Sigma Models

Sunday, August 28, 2011 3:10 PM (20 minutes)

We study a heterotic two-dimensional N=(0,2) gauged non-linear σ-model whose target space is a weighted complex projective space. We consider the case with N positively and N^~=NF - N negatively charged fields. This model is believed to give a description of the low-energy physics of a non-Abelian semi-local vortex in a four-dimensional N=2 supersymmetric U(N) gauge theory with NF > N matter hypermultiplets. The supersymmetry in the latter theory is broken down to N=1 by a mass term for the adjoint fields. We solve the model in the large-N approximation and explore a two-dimensional subset of the mass parameter space for which a discrete ZN-N^~ symmetry is preserved. Supersymmetry is generically broken, but it is preserved for special values of the masses where a new branch opens up and the model becomes super-conformal.

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Session Classification: Parallel Session 2