

**Seminar on**  
**THEORETICAL PARTICLE PHYSICS**

on Wednesday, 15 July 2015, at 2.00 p.m. s. t.  
Theresienstraße 37 / III, Seminar Room A318

Speaker: Arkady Vainshtain  
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Title: "Supersymmetric  $N=(0,2)$  sigma Models in 2d"

**Abstract:**

We study  $N=(0,2)$  deformed  $(2,2)$  two-dimensional sigma models. Such heterotic models were discovered previously on the world sheet of non-Abelian strings supported by certain four-dimensional  $N=1$  theories. We study geometric aspects and holomorphic properties of these models, and derive a number of exact expressions for the beta functions in terms of the anomalous dimensions analogous to the NSVZ beta function in four-dimensional Yang-Mills. We also study nonperturbative aspects of the models, particularly spontaneous breaking of supersymmetry.