

## **abstract**

SPECIAL MATHEMATICAL PHYSICS SEMINAR

Topic:

Speaker:

Affiliation:

Date:

Time/Room:

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We will briefly review the construction of the quantum sigma model with target a Torus adapting the work of Kapustin and Orlov (hep-th/0010293v2) to the Hamiltonian setup. This allows us to set up mirror-symmetry for tori entirely within the vertex algebra framework. After this we will show some problems one faces when generalizing these constructions to other Nilmanifolds with noncommutative fundamental group, or to tori equipped with gerbes. In particular the Harmonic analysis on these nilmanifolds plays a crucial role. This is a report on joint ongoing research with M. Aldi (UCB).