Title:

The N = 1 Heisenberg-Virasoro VOSA at level zero Abstract:

The N = 1 super Heisenberg–Virasoro algebra at level zero is introduced as a natural generalisation of the non-super case studied previously by the authors. By studying Fock spaces i.e. free field representation we calculate characters of irreducible highest weight modules. As a notable difference from classical case, the maximal submodules in some highest weight modules are generated by a subsingular vector.

We present three screening operators, two of which appear in study of certain logarithmic vertex operator algebras. By using them we obtain explicit formulas for singular and subsingular vectors as well as maps between the Verma modules not all of which are embeddings.

This is a joint work with D. Adamović and B. Jandrić.