

**Vera Serganova:**

Construction of abelian envelope for the Deligne categories  $\text{Rep GL}(t)$  for integer  $t$ .

**Abstract:** The Deligne categories  $\text{Rep GL}(t)$  are symmetric rigid tensor categories satisfying certain universality conditions. If  $t$  is not integer then the Deligne category is semisimple. For integer  $t$  the category is not abelian. In the latter case we construct an abelian envelope of  $\text{Rep GL}(t)$  by taking filtered inverse limit of the categories of representations of the supergroup  $\text{GL}(m|n)$  with  $m - n = t$ , and prove the universality of this category.

We also show that this category is a highest weight category where the standard objects are described using tensor representations of  $gl(\infty)$ .