In this talk we will be focused on non-semisimple categories of modules for affine vertex (super)algebras. If  $\mathfrak{g}$  is a Lie algebra, then the affine vertex algebra  $L_k(\mathfrak{g})$  usually admits non-semisimple modules only beyond the category  $KL_k$ . But if  $\mathfrak{g}$  is a Lie superalgebra, even the category  $KL_k$  can contain indecomposable modules. We will present new semi-simplicity results for the category  $KL_k$  in the case of a Lie superalgebra (jointly with P. Möseneder and P. Papi) and discuss examples when  $KL_k$  contains indecomposable highest weight modules. We also present some conjectures in this direction.

Next, we study the representation theory of affine vertex algebras and W-algebras by using recent free field realizations, which are motivated by finding inverses of the Quantum Hamiltonian Reductions. These realisations are useful for construction of non-semisimple modules and studying fusion rules. We will also show how these explicit realizations can be used for finding the decompositions of conformal embeddings.