Categorical action of an affine coideal on representations of SO2n
Hankyung Ko (Bonn)

Consider the category Rep(G) of rational representations for an algebraic
group G over a field of characteristic p. When G is a general linear group
GLn, the type A affine Lie algebra acts categorically on Rep(G), in the
sense of Khovanov-Lauda-Chuang-Rouquier. This action is used by
Riche-Williamson to prove that diagrammatic Soergel bimodules act on
Rep(GLn), which provides their tilting character formula. To do the same in
other classical types, we need to replace the affine (type A) Lie algebra
by a certain coideal subalgebra of it. I will describe the coideal action
in type D and relate it to Soergel bimodules.
This is a joint work in progress with Catharina Stroppel.