Braid group actions and Heisenberg categorification

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Associated to a simply laced Dynkin diagram there is a corresponding affine Lie algebra and a Heisenberg subalgebra. On the Fock space representation of this Heisenberg algebra we construct an action of a braid group. We also categorify this action by constructing functors on a certain category of modules and show that these functors satisfy the braid group relations. This is joint work with S. Cautis and A. Licata.