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University of Ottawa, Ottawa, ON K1N 6N5, Canada. *Quantum Heisenberg categorification.*

The Heisenberg algebra plays a vital role in many areas of mathematics and physics. We will describe a family of quantum Heisenberg categories, depending on a choice of central charge, that categorify this algebra. When the central charge is nonzero, these categories act on modules for cyclotomic quotients of the affine Hecke algebra. In central charge zero, we obtain an affinization of the HOMFLY-PT skein category, which acts on modules for $U_q(\mathfrak{gl}_n)$. We will also discuss how the categories can be generalized by adding a Frobenius superalgebra into the construction. This is joint work with Jon Brundan. (Received August 10, 2018)