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David E. V. Rose* (davidero@usc.edu) and **Hoel Queffelec**. *Annular Khovanov homology via trace decategorification.*

Sutured annular Khovanov homology (saKh) is a homology theory for links in the thickened annulus, categorifying the Kauffman skein module of the annulus. This invariant is interesting topologically, e.g. it detects the trivial braid. In this talk, we'll discuss work relating saKh to categorified quantum groups. More specifically, we show that saKh can be recovered from categorified quantum $\mathfrak{sl}(m)$ via trace decategorification and classical skew Howe duality. This work gives a conceptual basis for the recently discovered action of $\mathfrak{sl}(2)$ on saKh (by Grigsby-Licata-Wehrli) and also provides the first definition of $\mathfrak{sl}(n)$ Khovanov-Rozansky homology for links in the thickened annulus, which we in turn show carries an action of $\mathfrak{sl}(n)$. (Received September 21, 2014)