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Matthew T Hogancamp* (hogancam@usc.edu). *Torus links and Catalan combinatorics.*

I will present on recent progress in understanding the q,t Catalan polynomials (and generalizations) and their relation to the Khovanov-Rozansky homology of torus links. Specifically, I will present a simple new recursion, motivated by connections to topology, for the q,t Fuss-Catalan polynomials. One can also generalize these recursions to give (conjectural) formulas for the anti-invariant part of Haiman's polygraph rings, in terms of the Khovanov-Rozansky homology of the (n, nk) torus links, via a conjecture communicated to me by Gorsky. (Received September 12, 2017)