

1093-57-339

Thomas C Jaeger* (tcjaeger@syr.edu). *A decomposition of deformed Khovanov-Rozansky Homology*. Preliminary report.

Khovanov and Rozansky's $\mathfrak{sl}(n)$ homology associates a graded chain complex to a knot K . Any polynomial $P(x)$ of degree $n + 1$ gives rise to an (ungraded) deformation of this theory, as first observed by Gornik. We show that this deformation decomposes as a direct sum of complexes associated to the roots of $P'(x)$. We conjecture that these summands are isomorphic to $\mathfrak{sl}(n_i)$ homology, where the n_i are the multiplicities of the corresponding roots. This generalizes work of Lee and Bar-Natan–Morrison in the $\mathfrak{sl}(2)$ case and by MacKaay–Vaz for $\mathfrak{sl}(3)$. (Received August 20, 2013)