KAYLA WRIGHT, University of Oregon

Twists, Higher Dimers and SL_3 and SL_4 Webs in Grassmannian Cluster Algebras

As a sequel to Esther Banaian's talk, we will deepen and make more concrete the connection between SL_k webs and Grassmannian cluster algebras. We will show that the duality of the web bases presented in Esther's talk tells us information about twists of cluster variables. Namely, dual webs govern combinatorial formulae using higher dimer covers for twists of cluster variables. Moreover, we use the machinery of our dual web bases to classify (up to the widely believed Fomin–Pylyavskyy conjectures) cluster variables of rank 3 and 4 in $Gr(3, n)$ and $Gr(4, n)$.