Edward Richmond (edward.richmond@okstate.edu), Vasu Tewari* (vasut@math.washington.edu) and Steph van Willigenburg (steph@math.ubc.ca). A noncommutative geometric Littlewood-Richardson rule.

The geometric Littlewood-Richardson rule is a combinatorial algorithm for computing Littlewood-Richardson coefficients derived from degenerating the Richardson variety into a union of Schubert varieties in the Grassmannian. Such rules were first given by Vakil, and later generalized by Coskun.

In this talk, we will describe a noncommutative version of the geometric Littlewood-Richardson rule, and use it to establish a geometric explanation for positivity of noncommutative Littlewood-Richardson coefficients in certain cases. (Received February 09, 2016)