1083-14-236 Mahir Bilen Can (mcan@tulane.edu), Michael O. Joyce* (mjoyce3@tulane.edu) and Benjamin J. Wyser (bwyser@illinois.edu). Complete Quadrics and Colored Symmetric Rooks Preliminary report.

We discuss the weak Bruhat order on the variety of complete quadrics and show how it leads to interesting combinatorics that can be described in terms of colored symmetric rooks. These objects parameterize the orbits of a Borel subgroup acting on the variety of complete quadrics, and understanding the combinatorics of the weak order leads to interesting identities that give a factorization of certain multiplicity-free sums of Schubert polynomials. (Received September 04, 2012)