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Alex Fink, Jenna Rajchgot* (rajchgot@umich.edu) and **Seth Sullivant**. *Matrix Schubert varieties and Gaussian conditional independence models.*

Matrix Schubert varieties are certain varieties in the affine space of square matrices determined by putting rank conditions on submatrices. I will discuss analogs of these varieties for the spaces of upper triangular and symmetric matrices and show that, as in the traditional matrix Schubert setting, defining ideals have nice Gröbner bases, and primary decomposition of sums of defining ideals can be computed combinatorially.

Our motivation for discussing these upper triangular and symmetric matrix Schubert varieties comes from algebraic statistics. I will explain how to use matrix Schubert varieties to solve two problems concerning Gaussian random variables.

This is joint work with Alex Fink and Seth Sullivant. (Received September 21, 2015)