

1139-05-497

**Laura Escobar\*** (lescobar@illinois.edu) and **Bernd Schober**. *Bijections between symmetric and antisymmetric matrices*. Preliminary report.

We consider matrices with entries in the finite field with  $q$  elements where  $q$  is a prime power. In [Lewis-Liu-Morales-Panova-Sam-Zhang '11] it is shown that the following sets have the same cardinality and ask for a bijection: invertible  $n \times n$  skew-symmetric matrices, invertible  $n \times n$  symmetric matrices with zero diagonal, and invertible  $(n - 1) \times (n - 1)$  symmetric matrices. I will describe techniques from Schubert geometry to construct bijections between these sets. Based on joint work with Bernd Schober. (Received February 19, 2018)