1097-05-185 **Joel Brewster Lewis*** (jblewis@math.umn.edu), **Victor Reiner** and **Dennis Stanton**.
*Reflection factorizations of Singer cycles.*

A classical combinatorial problem (with solutions originally due to Hurwitz and Dénes) is to count factorizations of the long cycle as a product of transpositions. In this talk, I will discuss a $q$-analogue, replacing the symmetric group with $GL(n, q)$, the long cycle with a "Singer cycle", and transpositions with reflections. The pleasant central result is that the number of shortest such factorizations (i.e., with $n$ reflections) is $(q^n - 1)^{n-1}$. I will also mention some generalizations (notably, to factorizations of any length) and open questions. The main tool is the ordinary representation theory of $GL(n, q)$. (Received January 21, 2014)