

1154-13-591

Chelsea Drescher* (chelseadrescher@my.unt.edu) and **Anne V. Shepler**. *Invariants of modular reflection groups and (q, t) -binomial coefficients.*

Generalizations of Catalan numbers connect the Hilbert series of certain invariant spaces with the representation theory of rational Cherednik algebras for Coxeter and complex reflection groups. In 2017, Lewis, Reiner, and Stanton conjectured an analogous connection between the modular general linear group and (q, t) -binomial coefficients. We will discuss a solution to a local case of this conjecture. When the characteristic of the underlying field divides the order of the group, the subgroup fixing a reflecting hyperplane is a semi-direct product of diagonalizable reflections and transvections. We will describe the invariant ring for these Landweber-Stong groups reflecting about a fixed hyperplane acting on a polynomial ring modulo Frobenius powers. The resulting Hilbert series counts the number of orbits of the group acting on a vector space. (Received September 07, 2019)