

1056-05-1586

**Jim Haglund\*** (jhaglund@math.upenn.edu), 209 S. 33rd. St., Math. Dept., Univ. of Penn., Philadelphia, PA 19104-6395. *Experimental Investigations into the Zeros of Rook Polynomials and Analytic Functions*. Preliminary report.

We discuss a multivariate refinement (due to the speaker and M. Visontai) of a conjecture from 1996 of Ono, Wagner, and the speaker involving the zeros of a certain permanent related to the theory of matching and rook polynomials. Connections with results involving polynomials with only real zeros are discussed. We also introduce some conjectures involving the zeros of approximates to the Riemann Xi-function and incomplete gamma functions, based on Maple calculations. (Received September 22, 2009)