

Some results on signed Mahonian polynomials Yuan-Hsun Lo

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Abstract

The enumeration of the major index with sign over the symmetric group \mathfrak{S}_n yields a remarkable factorization formula in terms of q -factorials, call *signed Mahonian polynomial*. In this talk, we will introduce some new progress on signed Mahonian polynomials over the complex reflection group $G(r, 1, n) = C_r \wr \mathfrak{S}_n$ and its subset, where the “sign” is taken to be any of the $2r$ one-dimensional characters and the “Mahonian” statistics are those equi-distributed with the length function.