

1152-05-142

**Sarah K Mason\***, 127 Manchester Hall, Winston Salem, NC 27109, and **Dominic Searles**. *A generating function for left keys and its associated representation theory*. Preliminary report.

We introduce a polynomial basis generated by left keys of semi-standard Young tableaux, called the Young key polynomials. The connection between this new basis and the classical key polynomials mirrors the connection between the Young quasisymmetric Schur functions and the quasisymmetric Schur functions. We show that a Young key polynomial is equal to the trace of a diagonal element acting on a  $B$ -module, where  $B$  is the Borel subgroup of the general linear group. We further develop “Young” analogues of many well-known polynomial bases and discuss their related properties. (Received August 30, 2019)