

1135-05-1283

**Maria Monks Gillespie\*** (mgillespie@math.ucdavis.edu), **Jake Levinson** and **Kevin Purbhoo**. *Crystallizing the Schur  $Q$ -functions*.

Crystal base theory, which first appeared in the study of the representation theory of quantum groups, has recently provided new methods for understanding the combinatorics of symmetric functions having a positive Schur expansion. In particular, there is a crystal structure - a certain weighted directed graph - on the set of all semistandard Young tableaux of a given shape, whose connected components have total weight equal to Schur functions.

We provide a similar crystal-like structure on shifted tableaux such that the weights of the connected components are the Schur  $Q$ -functions, an important class of symmetric functions that arises naturally in the orthogonal Grassmannian, in the projective representation theory of  $S_n$ , and as a certain specialization of the Hall-Littlewood polynomials. (Received September 20, 2017)