

1117-05-300

James B McKeown* (mckeown@math.miami.edu), 1365 Memorial Drive, Ungar 528b, Coral Gables, FL 33146. *The Combinatorics of the Waldspurger Decomposition*. Preliminary report.

In 2005 J.L. Waldspurger proved a remarkable theorem. Given a finite reflection group G , the closed cone over the positive roots is equal to the disjoint union of images of the open weight cone under the action of $1 - g$.

$$C_R = \bigsqcup_{g \in G} (1 - g)\mathring{C}_W$$

When G is taken to be the symmetric group \mathfrak{S}_n the decomposition is related to the familiar combinatorics of permutations but also has some surprising features. To see this, we give a nice combinatorial description of the cone $(1 - g)\mathring{C}_w$ in terms of the permutation g . (Received January 16, 2016)