

Reduced Words and a Formula of Macdonald

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Macdonald gave a remarkable formula connecting a weighted sum of reduced words for a permutation with the number of terms in a Schubert polynomial. We will review some of the fascinating results on the set of reduced words in order to put our main results in context. Then we will discuss a new bijective proof of Macdonald’s formula based on Little’s bumping algorithm. We will also discuss some generalizations of this formula based on work of Fomin, Kirillov, Stanley and Wachs. This project extends earlier work by Benjamin Young on a Markov process for reduced words of the longest permutation.

This is joint work with Ben Young and Alexander Holroyd.

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