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**Elizabeth Niese\*** ([eniese@math.vt.edu](mailto:eniese@math.vt.edu)), Blacksburg, VA 24061, and **Nicholas Loehr**. *A  $q, t$ -analogue of the hook-length formula.*

The hook-length formula is an early result in algebraic combinatorics. The formula counts the number of standard Young tableaux of a particular shape  $\mu$ . Macdonald introduced a  $q$ -analogue of the hook-length formula which was proved by Garsia and Haiman using the algebraic definition of Macdonald polynomials. In this talk we present a bijective proof of a  $q, t$ -analogue of the hook-length formula for combinatorial Macdonald polynomials when  $\mu$  is a hook shape which specializes to Macdonald's original formula when  $t = q$ . A related result was obtained independently by Meesue Yoo in "Combinatorial Formula for the Hilbert Series of bigraded  $S_n$ -modules". Our bijection also leads to a combinatorial proof of a symmetry property for Macdonald polynomials. (Received August 03, 2010)