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**Vidya Venkateswaran\*** ([vidyav@caltech.edu](mailto:vidyav@caltech.edu)), Mathematics 253-37, Caltech, Pasadena, CA 91125. *Vanishing Integrals for Hall-Littlewood Polynomials.*

In a recent paper, Rains and Vazirani used Hecke algebra techniques to develop  $(q, t)$ -generalizations of a number of well-known vanishing identities for Schur functions. However, their approach does not work directly at  $q = 0$  (the Hall-Littlewood level). We discuss a technique that is more combinatorial in nature, and allows us to obtain generalizations of some of their results at  $q = 0$  as well as a finite-dimensional analog of a recent summation formula of Warnaar. We will also briefly explain how these results are related to  $p$ -adic representation theory. Finally, we will explain how this method can be extended to give an explicit construction of Hall-Littlewood polynomials of type  $BC$ . (Received August 31, 2011)