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**Emily Sergel Leven\***, esergel@ucsd.edu. *A proof of the Square Paths Conjecture.*

The modified Macdonald polynomials, introduced by Garsia and Haiman (1996), have many astounding combinatorial properties. One such class of properties involves applying the related  $\nabla$  operator of Bergeron and Garsia (1999) to basic symmetric functions. The first discovery of this type was the (recently proven) Shuffle Conjecture of Haglund, Haiman, Loehr, Remmel, and Ulyanov (2005), which relates the expression  $\nabla e_n$  to parking functions. In (2007), Loehr and Warrington conjectured a similar expression for  $\nabla p_n$  in terms of labeled square paths. In this talk, I discuss my extension of Haglund and Loehr's (2005) notion of schedules to labeled square paths and apply it to prove the Square Paths Conjecture. (Received January 14, 2016)