

1103-05-197

Darij Grinberg*, 70 Pacific Street, Apt 334, Cambridge, MA 02139. *Quasisymmetric functions and dual immaculate creation operators.*

Mike Zabrocki conjectured that the dual immaculate quasisymmetric functions (an analogue of Schur functions in which the semistandard Young tableaux are replaced by "immaculate tableaux" – tableaux of composition shape with every row weakly increasing and the first column strictly increasing) can be constructed inductively in a similar vein to the definition of the immaculate noncommutative symmetric functions, using Bernstein-like creation operators. I will give a proof of this fact and relate it to the dendriform algebra structure on QSym . I will also discuss connections to Malvenuto and Reutenauer's generalization of P-partitions – the so-called Γ -partitions – and how the theory of QSym could be constructed using the latter (forthcoming work).

Most of the talk follows <http://web.mit.edu/~darij/www/algebra/dimcreation.pdf> . (Received August 19, 2014)