

1086-05-1215

**Chris Berg\*** (cberg@lacim.ca), **Franco Saliola** and **Luis Serrano**. *Pieri operators on the affine nil Coxeter algebra.*

In their paper, “Affine insertion and Pieri rules for the affine Grassmannian”, Lam, Lapointe, Morse and Shimozono develop combinatorics associated to the study of  $k$ -Schur functions, and introduce generalizations of  $k$ -Schur functions, which they call strong Schur functions. Together with Saliola and Serrano, we developed a theory of operators on the nil Coxeter algebra which utilize the combinatorics of Lam, Lapointe, Morse and Shimozono. The development of these operators have allowed us to give structure coefficients in various cases and have solved several conjectures relating to strong Schur functions. In my talk, I will outline the definition and basic properties of these operators and explain their role in proving the conjectures. (Received September 20, 2012)