NANTEL BERGERON, York University
An Hopf Monoid of supercharacter

Recently, we (27 of us) have shown an isomorphism between the supercharacter theory of the upper unitriangular matrices over a finite field and the combinatorial Hopf algebra of symmetric functions. With M.Aguiar and N.Thiem, we have recently "lifted" the Hopf algebra structure on supercharacter to an Hopf monoid on species. One advantage to this approach is that one can then obtain multiplicity free formulas for the antipode in different basis. I will discuss this.