

February 18, 2015: Sean Clark (Northeastern). *Quantum shuffles and Lie superalgebras of basic type.*

Lie superalgebras of basic type are natural super analogues of simple Lie algebras. I will discuss some joint work with David Hill and Weiqiang Wang in which we construct a realization of (half of) their quantum enveloping algebras using a shuffle product. This can be used for a combinatorial construction of PBW bases and thus bar-invariant bases. In some special cases, these bar-invariant bases are canonical. If time permits, I will discuss the special case of $\mathfrak{gl}(2|1)$ and a crystal structure on its canonical basis.