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MV polytopes and components of quiver varieties

A number of interesting bases exist for the upper half of the universal envelopping algebra of a semisimple Lie algebra. One such basis is Lusztig's semicanonical basis which is indexed by components of quiver varieties. Another interesting basis is indexed by Mirkovic–Vilonen cycles which lead to the combinatorics of MV polytopes. In this talk, I will explain a natural bijection between the components of quiver varieties and the MV polytopes.

This is joint work with Pierre Baumann.