1117-16-160 **Ian M. Musson***, Department of Mathematical Sciences, University of Wisconsin-Milwaukee, Milwaukee, WI. *Shapovalov elements for basic classical simple Lie superalgebras.*

We provide upper bounds on the degrees of the coefficients of Shapovalov elements for a simple Lie algebra. If $\mathfrak{g}$ is a contragredient Lie superalgebra and γ is a positive isotropic root of $\mathfrak{g}$, we prove the existence and uniqueness of the Shapovalov element for γ and we obtain upper bounds on the degrees of its coefficients. For type A Lie superalgebras we give a closed formula for Shapovalov elements. We also explore the behavior of Shapovalov elements when the Borel subalgebra is changed, and the survival of Shapovalov elements in factor modules of Verma modules.

Now suppose that X is a set of orthogonal isotropic roots and $\lambda \in \mathfrak{h}^*$ is such that $\lambda + \rho$ is orthogonal to all roots in X. Shapovalov elements can be used to construct a highest weight module $M^X(\lambda)$ with character $\epsilon^\lambda p_X$. Here p_X is a partition function that counts partitions not involving roots in X. Examples of such modules can be constructed via parabolic induction provided X is contained in the set of simple roots of some Borel subalgebra. However our construction works without this condition and provides a highest weight module for the distinguished Borel subalgebra. (Received January 12, 2016)