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Ian M Musson*, Department of Mathematical Sciences, University of Wisconsin-Milwaukee, Milwaukee, WI. *Induced Modules and Supergeometry for the Lie Superalgebra $gl(m, n)$* . Preliminary report.

Let \mathfrak{g} be the Lie superalgebra $gl(m, n)$. In recent work we associated a Clifford algebra to every nilpotent orbit \mathcal{O} in \mathfrak{g}_0 and found the rank of the bilinear form defining this Clifford algebra. From this we deduced a lower bound on the multiplicity of a $U(\mathfrak{g})$ -module with an orbital subvariety of \mathcal{O} as associated variety. We also obtained modules where the lower bound on multiplicity is attained using parabolic induction. In this talk we review the earlier work and study the connection between these induced modules and supergeometry. (Received September 20, 2005)