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Marina Tvalavadze* (marina@math.usask.ca), Department of Mathematics and Statistics,
University of Saskatchewan, Saskatoon, SK S7N5E6, Canada. *Superinvolutions on graded
superalgebras.*

In this paper we describe graded superinvolutions on matrix superalgebras endowed with a group grading over an algebraically closed field F of characteristic zero. These results are necessary for the determination of the gradings on simple Lie and Jordan superalgebras that can be realized as skew-symmetric (resp. symmetric) elements of $R = M_{n,m}(F)$ under the superinvolution. (Received March 18, 2010)