

BIDETERMINANTS FOR SCHUR SUPERALGEBRAS

FRANTISEK MARKO

ABSTRACT. Let $S(m|n, r)_{\mathbb{Z}}$ be a \mathbb{Z} -form of a Schur superalgebra $S(m|n, r)_{\mathbb{Z}}$ generated by elements $\xi_{i,j}$. We solve a problem of Muir and describe a \mathbb{Z} -form of a simple $S(m|n, r)$ -module $D_{\lambda, \mathbb{Q}}$ over the field \mathbb{Q} of rational numbers, under the action of $S(m|n, r)_{\mathbb{Z}}$. This \mathbb{Z} -form is the \mathbb{Z} -span of modified bideterminants $[T_l : T_i]$. We also prove that each $[T_l : T_i]$ is a \mathbb{Z} -linear combination of modified bideterminants corresponding to $(m|n)$ -semistandard tableaux T_i . (joint work with Alexandr N. Zubkov)

E-mail address: `Fxm13@psu.edu`

THE PENNSYLVANIA STATE UNIVERSITY HAZLETON, EEUU