

Irreducible representations of a certain Jordan superalgebra

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The 3-dimensional Kaplansky superalgebra K_3 and the 4-dimensional superalgebras $D(t)$ ($t \neq 0$) are simple Jordan superalgebras. In the case $t = -1$, the superalgebra $D(-1)$ is isomorphic to the matrix superalgebra $M_{1,1}^{(+)}(F)$.

We obtain a classification of unital finite-dimensional irreducible Jordan representations of the superalgebra $D(t)$, $t \neq -1$, in the case of prime characteristic $p \neq 2$.

As a corollary we obtain a classification of finite-dimensional irreducible superbimodules over K_3 in the case of characteristic $p \neq 2$.