

1058-17-120

Irfan Bagci* (irfan@math.ucr.edu), Department of Mathematics, University of California at Riverside, Riverside, CA 92521. *On cohomology and support varieties for Lie superalgebras.*

We discuss finite generation of the relative cohomology rings for Lie superalgebras. We formulate a definition for detecting subalgebras and also discuss realizability of support varieties. As an application we compute the relative cohomology ring of the Lie superalgebra $S(n)$ relative to the graded zero component $S(n)_0$ and show that this ring is finitely generated. We also compute support varieties of all simple modules in the category of finite dimensional $S(n)$ -modules which are completely reducible over $S(n)_0$. (Received February 10, 2010)