1067-17-452   **Irfan Bagci*** (`irfan@math.ucr.edu`), University of California at Riverside, Riverside, CA 92521.
On cohomology and support varieties for Lie superalgebras.

In this paper we discuss finite generation of the relative cohomology rings for Lie superalgebras, we formulate a definition for detecting subalgebras,also discuss realizability of support varieties. As an application we compute the relative cohomology ring of the Lie superalgebra $\overline{S}(n)$ relative to the graded zero component $\overline{S}(n)_0$ and show that this ring is finitely generated. We also compute support varieties of all simple modules in the category of finite dimensional $\overline{S}(n)$-modules which are completely reducible over $\overline{S}(n)_0$. (Received September 04, 2010)