1133-17-99 **Irfan Bagci*** (irfan.bagci@ung.edu), Department of Mathematics, University of North Georgia, Oakwood, GA 30566, and **Lucas Calixto** and **Tiago Macedo**. *Weyl modules and Weyl functors for Lie superalgebras.*

Given an algebraically closed field k of characteristic zero, a Lie superalgebra $\mathfrak{g}$ over k and an associative, commutative k-algebra A with unit, a Lie superalgebra of the form $\mathfrak{g} \otimes_k A$ is known as a map superalgebra. Map superalgebras generalize important classes of Lie superalgebras, such as, loop superalgebras (where $A = \mathbb{C}[t^{\pm 1}]$), and current superalgebras (where $A = \mathbb{C}[t]$). Recently, in joint work with L. Calixto and T. Macedo, we defined Weyl functors, Weyl modules for all map superalgebras where $\mathfrak{g}$ is either $\mathfrak{sl}(n,n)$ with $n \geq 2$, or a finite-dimensional simple Lie superalgebra not of type $\tilde{S}(n)$ or $\mathfrak{q}(n)$. Under certain conditions on the triangular decomposition of these Lie superalgebras we proved that Weyl modules satisfy certain universal and tensor product decomposition properties. We also gave necessary and sufficient conditions Weyl modules to be finite dimensional. Finally, we proved that Weyl functors satisfy interesting homological properties, and show several examples to illustrate the differences between the super and non-super cases. In this talk I will provide a brief summary of these results. (Received July 14, 2017)