1145-17-1962   **Elyse Suzanne Rogers*** (`esrogers@ncsu.edu`), Department of Mathematics, 2108 SAS Hall, Box 8205, NC State University, Raleigh, NC 27695. *The Leibniz Multiplier of Lie and Leibniz Algebras.*

The Schur multiplier is a topic of great interest and has been investigated in both group theory and Lie algbceras. In this talk, I wish to explain how this theory can be applied to Leibniz algebras. Leibniz algebras are a non-commutative generalization of Lie algebras. If L is a finite dimensional Leibniz algebra over a field $\mathbb{F}$ with $char(\mathbb{F}) \neq 2$ then a pair of algebras (K, M) is called a defining pair for L if $L \cong K/M$ and if $M \subset Z(K) \cap [K, K]$. If K is of maximal dimension then it is called the cover of L and the corresponding maximum dimensional M is called the multiplier for L. We will discuss the differences in structure and dimension of the Lie and Leibniz multipliers of algebras in the lower central series. Furthermore, we can discuss the structure of the Leibniz multiplier of the Heisenberg Lie and Leibniz algebras of dimension $2n + 1$. (Received September 24, 2018)

1