

1124-17-79

Ismail Demir* (idemir@ncsu.edu). *Classification of Complex Nilpotent Leibniz Algebras.*

Leibniz algebras are non-antisymmetric generalization of Lie algebras. Classification of all nilpotent Lie algebras is still unsolved and is very difficult problem. Due to lack of antisymmetry in Leibniz algebras, the problem of classifying all nilpotent Leibniz algebras is more complicated. We give classification of 5–dimensional complex nilpotent Leibniz algebras. We use the canonical forms for the congruence classes of matrices of bilinear forms and some algebraic invariants to obtain our result. This is a joint work with my advisors Kailash C. Misra and Ernie Stitzinger. (Received August 29, 2016)