

1145-20-1008

Jonathan Scott Brown*, 260 Fitzelle Hall, SUNY Oneonta, Oneonta, NY 13820. *Finite W -algebra invariants*. Preliminary report.

Finite W -algebras are intimately related to the geometry of nilpotent orbits and the infinite dimensional representation theory of Lie algebras. They are defined in terms of a nilpotent orbit, and they are an invariant subalgebra of a left ideal in universal enveloping algebra of a reductive Lie algebra. Outside of type A there is no known formula for calculating generators of these algebras (apart from specific examples). Recent work by Kac, De Sole, and Valeri has produced a formula which produces generators of an important subalgebra of a finite W -algebra, and in this work we extend their results. This results in a formula for generators of more classes of finite W -algebras. (Received September 18, 2018)