

1106-16-2329

**Jonathan S Brown\***, jonathan.brown@oneonta.edu. *Primitive ideals and the variety of one-dimensional representations of finite  $W$ -algebras.* Preliminary report.

The classification of completely prime primitive ideals in the universal enveloping algebras of semisimple Lie algebras over  $\mathbb{C}$  is still an open problem. One recent approach is to relate such primitive ideals to the annihilators of certain one-dimensional finite  $W$ -algebra modules via the Scryabin Equivalence. With this in mind, Premet and Topley have recently classified this variety of one-dimensional finite  $W$ -algebra modules for most of the finite  $W$ -algebras associated to classical and exceptional Lie algebras. In this talk we explain how we have extended the work of Premet and Topley to classify the variety of one-dimensional finite  $W$ -algebra modules for finite  $W$ -algebras associated to Lie algebras of sufficiently low rank. (Received September 16, 2014)