

1054-17-296

Prasad Senesi* (senesi@cua.edu), Department of Mathematics, Catholic University of America, 620 Michigan Ave NE, Washington, DC 20064. *Finite-dimensional irreducible representations of equivariant map algebras.*

Let \mathfrak{g} be a finite-dimensional simple Lie algebra and A an affine algebraic variety defined over an algebraically closed field of characteristic 0. Let G be a finite group which acts via automorphisms upon \mathfrak{g} and A . The Lie algebra of regular maps from A to \mathfrak{g} which are equivariant under the the action of G is called an *equivariant map algebra*. Examples of such algebras include current algebras, multiloop algebras (in particular, the untwisted loop algebras $\mathfrak{g} \otimes k[t^{\pm 1}]$ and their twisted subalgebras), and the Onsager algebras.

In this talk we will classify the finite-dimensional irreducible representations of an arbitrary equivariant map algebra, and describe some conditions which ensure that all such representations are given by evaluation representations of \mathfrak{g} .

This is joint work with Erhard Neher and Alistair Savage. (Received September 15, 2009)