
ERHARD NEHER, University of Ottawa

Finite-dimensional representations of equivariant map algebras

Suppose a finite group acts on an algebraic variety X and a finite-dimensional Lie algebra \mathfrak{g} . Then the space of equivariant algebraic maps from X to \mathfrak{g} is a Lie algebra under pointwise multiplication. Examples of such equivariant map algebras include current algebras, twisted and untwisted loop algebras and their multi-variable versions, and the (generalized) Onsager algebra.

In this talk I will present a classification of all finite-dimensional irreducible representations of equivariant map algebras (joint work with Alistair Savage and Prasad Senesi) and describe their extensions (joint work with Alistair Savage). The latter result allows us to determine the block decomposition of the category of all finite-dimensional representations of equivariant map algebras.