Global Weyl modules for twisted loop algebras

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Abstract

Let $\mathfrak{g}$ be a simple complex Lie algebra. The repesentation theory of the loop algebras $\mathfrak{g} \otimes \mathbb{C}\left[t^{\pm 1}\right]$ has been an active area of research for several decades. In particular, the Global Weyl modules have played a prominent role since their introduction over a decade ago. – In this talk we review the motivation and history of the Weyl modules, discuss their utility and classification, and conclude with a new result concerning the description of these modules over loop (sub)algebras of invariants under certain group actions.

Keywords: Lie algebra, Weyl module, group action.