Finite-dimensional representation theory of the queer Lie superalgebra \(q(n)\)

Abstract:

We will first describe some classical theory of the queer Lie superalgebras \(q(n)\), such as Clifford modules, (generic) character formula for the irreducible representations, and classification of the blocks of finite-dimensional representations. Then we will focus our attention to \(q(3)\) and provide an explicit description of the Ext-quivers of the blocks. A proof of a "virtual" BGG reciprocity for \(q(n)\), which then gives the radical filtrations of indecomposable projective objects for \(q(3)\), will be provided.