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.