Abstract:

We will first describe some classical theory of the queer Lie superalgebras $\mathfrak{q}(n)$, 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 $\mathfrak{q}(3)$ and provide an explicit description of the Ext-quivers of the blocks. A proof of a "virtual" BGG reciprocity for $\mathfrak{q}(n)$, which then gives the radical filtrations of indecomposable projective objects for $\mathfrak{q}(3)$, will be provided.