Equivariant map queer Lie superalgebras
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Abstract. An equivariant map queer Lie superalgebra is the Lie superalgebra of regular maps from an algebraic variety (or scheme) $X$ to a queer Lie superalgebra $q$ that are equivariant with respect to the action of a finite group $\Gamma$ acting on $X$ and $q$. In this paper, we classify all irreducible finite-dimensional representations of the equivariant map queer Lie superalgebras under the assumption that $\Gamma$ is abelian and acts freely on $X$. We show that such representations are parameterized by a certain set of $\Gamma$-equivariant finitely supported maps from $X$ to the set of isomorphism classes of irreducible finite-dimensional representations of $q$. In the special case where $X$ is the torus, we obtain a classification of the irreducible finite-dimensional representations of the twisted loop queer superalgebra.