

On Yangians and Finite W -algebras

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Finite W -algebras are certain associative algebras attached to a pair (\mathfrak{g}, e) , where \mathfrak{g} is a complex semisimple Lie algebra or a classical Lie superalgebra and $e \in \mathfrak{g}$ is an even nilpotent element. J. Brown, J. Brundan and S. Goodwin proved that the finite W -algebra for the general linear Lie superalgebra $\mathfrak{gl}(m|n)$ for regular nilpotent e is isomorphic to a truncation of a shifted super-Yangian of $\mathfrak{gl}(1|1)$. The super-Yangian $Y(Q(n))$ of the queer Lie superalgebra $Q(n)$ was defined by M. Nazarov. We show that the finite W -algebra for $Q(n)$ for regular nilpotent e is isomorphic to a quotient of $Y(Q(1))$.