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*Super and  $q$  Schur algebras*

We review the definitions and properties of Schur algebras,  $q$ -Schur algebras, and Schur superalgebras. We define the  $q$ -Schur superalgebra  $S_q(m|n, r)$  and discuss some of its properties. When  $q$  is a root of unity,  $S_q(m|n, r)$  is not cellular or quasi-hereditary in general. This can be shown using the quantum Frobenius map and a version of Steinberg's tensor product theorem.