Brundan-Kazhdan-Lusztig conjecture for general linear Lie superalgebras

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Abstract. In the framework of canonical and dual canonical bases of Fock spaces, Brundan in 2003 formulated a Kazhdan-Lusztig type conjecture for the characters of the irreducible and tilting modules in the BGG category for the general linear Lie superalgebra for the first time. In this talk, we give a outline of a proof of Brundan's conjecture and its variants associated to all Borel subalgebras in full generality. This is a joint work with Shun-Jen Cheng and Weiqiang Wang.