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Yue Zhao* (etuzhao@ucdavis.edu), One Shields Ave, Davis, CA 95616. *A combinatorial description of some representations of degenerate double affine Hecke algebras of type BC_n .*

Let $N = p + q$. Consider the pair (G, K) , where $G = GL_N$ and $K = GL_p \times GL_q$. Let $O(G/K)$ be the algebra of regular functions on G/K . This is also a module for $D(G/K)$ which is the algebra of differential operators. Etingof, Freund and Ma defined a Schur Weyl like functor $F_{n,p}$ that sends each $D(G/K)$ -module M to a representation $F_{n,p}(M)$ of the degenerate double affine Hecke algebra of type BC_n . In this talk, we will describe the representation $F_{n,p}(O(G/K))$. There are quantum versions of the above: $\mathcal{D}_q(G/K)$, $\mathcal{O}_q(G/K)$ and $\mathcal{F}_n(\mathcal{O}_q(G/K))$. Our ultimate goal is to give a similar description of the representation $\mathcal{F}_n(\mathcal{O}_q(G/K))$. (Received August 27, 2018)