1135-16-547 **Jieru Zhu***, Department of Mathematics, University of Oklahoma, Norman, OK 73019-3103. *Two Boundary Centralizer Algebras for $\mathfrak{gl}(n|m)$.*

The degenerate two boundary Hecke algebra $\mathcal{H}_d$ is generated by the symmetric group on d letters and polynomial rings subject to further relations. It acts on the tensor space $M \otimes N \otimes V^{\otimes d}$, where M and N are irreducible polynomial representations of the Lie superalgebra $\mathfrak{gl}(n|m)$ whose highest weights are represented by rectangular Young diagrams, and this action commutes with that of $\mathfrak{gl}(n|m)$. As a module for the centralizer of $\mathfrak{gl}(n|m)$, $M \otimes N \otimes V^{\otimes d}$ decomposes into irreducible modules labeled by hook Young diagrams, and a basis is given via Young tableaux where the polynomial generators act by explicit combinatorial eigenvalues. These modules remain irreducible when restricted to the action of $\mathcal{H}_d$, and provide a class of irreducible representations for $\mathcal{H}_d$. This construction generalizes results in the $\mathfrak{gl}(n)$ case by Zajj Daugherty (2010.) (Received September 07, 2017)