1145-VV-380 **Trevor K Karn*** (tuk377@psu.edu) and **Max D Wakefield** (wakefiel@usna.edu), 572C Holloway Rd, Annapolis, MD 21412. *Stirling Numbers in Braid Matroid Kazhdan-Lusztig Polynomials.*

Restricted Whitney numbers of the first kind appear in the combinatorial recursion for the matroid Kazhdan-Lusztig polynomials. In the special case of braid matroids (the matroid associated to the partition lattice, the complete graph, the type A Coxeter arrangement and the symmetric group) these restricted Whitney numbers are Stirling numbers of the first kind. We use this observation to obtain a formula for the coefficients of the Kazhdan-Lusztig polynomials for braid matroids in terms of sums of products of Stirling numbers of the first kind. This results in new identities between Stirling numbers of the first kind and Stirling numbers of the second kind, as well as a non-recursive formula for the braid matroid Kazhdan-Lusztig polynomials. (Received September 04, 2018)