1125-05-816 **Dustin Hedmark***, dustin.hedmark@uky.edu. *Homology of Filters in the Partition Lattice.*

Starting with the computation of the Mobius function of the even partition lattice by Sylvester in 1976, there has been much interest in understanding the topology and representation theory of filters in the partition lattice. In this talk I will speak on current work with Richard Ehrenborg where we compute the homology groups, as well as the $\mathfrak{S}_{n-1}$ action on these homology groups, for arbitrary filters in the partition lattice Π_n using Mayer Vietoris Sequences. We will spend most of our time looking at examples of computations of homologies in the partition lattice, notably a derivation of Wach's well known results on the d-divisible partition lattice (Received September 12, 2016)