

1145-05-2881 **Nathan Reff*** (nreff@brockport.edu), 350 New Campus Drive, Brockport, NY 14420, and
Luke Duttweiler (ldutt2@brockport.edu), 350 New Campus Drive, Brockport, NY 14420.

Spectra of oriented hypergraphs.

An oriented hypergraph is a hypergraph where each vertex-edge incidence is given a label of $+1$ or -1 . The adjacency and Laplacian eigenvalues of an oriented hypergraph are studied. In particular, combinatorial bounds are found which relate structural parameters to these eigenvalues. Some hypergraph cycle and path families will have their spectra fully determined. (Received September 25, 2018)