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**Nathan Reff\*** ([nreff@brockport.edu](mailto:nreff@brockport.edu)), Department of Mathematics, The College at Brockport, State University of New York, Brockport, NY 14420. *Intersection graphs of oriented hypergraphs and their matrices*. Preliminary report.

An oriented hypergraph is a hypergraph where each vertex-edge incidence is given a label of +1 or -1. The intersection graph of an oriented hypergraph generalizes the line graph of a signed graph. An arbitrary simple signed graph is shown to be the intersection graph of infinitely many  $k$ -uniform linear oriented hypergraphs. The intersection graph and the dual of an oriented hypergraph are used to generalize some fundamental matrix relationships known for graphs and signed graphs. Eigenvalues of the adjacency and Laplacian matrices associated to an oriented hypergraph, its dual, and intersection graph are also studied. (Received September 16, 2014)