1035-05-368 Christopher K. Storm* (cstorm@adelphi.edu), Department of Mathematics and Computer Scienc, 111 Alumnae Hall, Garden City, NY 11530, and Barry Balof. Hypergraph zeta functions and isospectral digraphs.

We begin with some exposition on hypergraph zeta functions. We look at hypergraph zeta functions as well as some of the key structures which aid in giving determinant expressions of the zeta function. There are two important structures: "oriented line graphs" and associated bipartite graphs. Finally, as an outgrowth of the study of these structures, we present a new construction of isospectral (strongly connected) digraphs. The spectrum considered is from the adjacency operator. We include some discussion on the number of vertices and arcs in the digraphs as well as on determining when the digraphs are non-isomorphic. (Received September 04, 2007)