Nathan H Reff* (reff@math.binghamton.edu), Department of Mathematical Sciences, Binghamton University, Binghamton, NY 13902-6000. Spectral properties of complex unit gain graphs.

A complex unit gain graph is a graph where each orientation of an edge is given a complex unit, which is the inverse of the complex unit assigned to the opposite orientation. We extend some fundamental concepts from spectral graph theory to complex unit gain graphs. (Received September 22, 2011)