1067-05-2134   **Seth A. Meyer*** (`smeyer@math.wisc.edu`), 480 Lincoln Dr., Madison, WI 53706. *Zero Forcing Sets and Bipartite Circulants.* Preliminary report.

Consider a graph whose vertices are each colored either black or white. We will study the following phenomenon: we allow a black vertex v to change a white neighbor w to black whenever all the neighbors of v other than w are black. Any set of black vertices is called a zero forcing set as long as when the graph is entirely white except for these vertices, repeated applications of the previous rule eventually make every vertex black. In this talk we will discuss both the minimum size of a zero forcing set for bipartite graphs and applications to problems concerning the minimum rank of matrices given by these graphs. (Received September 22, 2010)