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Nathan Warnberg* (warnberg@iastate.edu). *Positive Semidefinite Propagation Time*. Preliminary report.

Positive semidefinite (PSD) zero forcing on a simple undirected graph G is based on the following color change rule: Let $B \subseteq V(G)$ be colored black and the rest of the vertices be colored white. Let C_1, C_2, \dots, C_k be the connected components of $G - B$. For any black vertex b that has exactly one white neighbor w in $G[B \cup C_i]$, change the color of w to black. A minimum PSD zero forcing set (PSDZFS) is a set of black vertices of minimum cardinality that color the entire graph black after iteratively applying the color change rule. The PSD propagation time of a PSDZFS B of graph G is the minimum number of iterations of the color change rule needed to force all vertices of G black, starting with the vertices in B black. Minimum and maximum PSD propagation time are taken over all minimum PSD zero forcing sets. Some interesting results will be presented. (Received August 26, 2013)