

1125-15-1482

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Vanderwoerd.** *On the addressing problem for triangular graphs.*

Graham and Pollak introduced the problem of addressing the vertices of a graph using  $t$ -tuples with entries in a symbol set  $\{0, a, b\}$  so that the distance between any two vertices is the number of positions in which the one address has symbol  $a$  and the other has symbol  $b$ . For a given graph  $G$ , the goal is to find the minimum  $t$  such that  $G$  has an addressing with  $t$ -tuples. A well-known lower bound is obtained from the the inertia of the distance matrix of  $G$ . We describe a matrix technique to improve the lower bound, applying it to triangular graphs. (Received September 17, 2016)