

## Min Orderings and the Complements of Threshold Tolerance Graphs

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An interval graph is the graph of intersections of a set of intervals on a line. Interval graphs have a rich and well-known set of structural properties. The complements of threshold tolerance graphs, known as co-TT graphs, are a generalization of interval graphs, and they can each be modeled with a set of intervals by modifying their interpretation. Let  $\Gamma$  denote the matrix whose rows are  $(1, 1)$  and  $(1, 0)$ , and let  $S$  denote the matrix whose rows are  $(0, 1)$  and  $(1, 0)$ . A min ordering of a digraph is an ordering of vertices such that the adjacency matrix, possibly with some ones on the diagonal, does not have  $\Gamma$  or  $S$  as a submatrix. We show that the co-TT graphs are those undirected graphs that have a min ordering and explore their relationship to the more general class of min-orderable digraphs.

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