

Interval-like graphs and digraphs

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I will talk about a new class of digraphs which unifies several seemingly different graph and digraph classes under one umbrella. These classes are all, broadly speaking, different generalizations of interval graphs, and include, in addition to interval graphs, classes such as adjusted interval digraphs, complements of threshold tolerance graphs (known as co-TT graphs), bipartite interval containment graphs, complements of bipartite circular arc graphs, and two-directional orthogonal ray graphs. This unification is made possible by introducing reflexive relationships (loops) into the analysis. All the above classes are also united by a common ordering characterization, the existence of a min ordering.

This is joint work with Jing Huang, Ross. M. McConnell, and Arash Rafiey.