Recognition of Co-Threshold Tolerance Graphs
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The talk is the result of joint work with Petr Golovach, Pinar Heggernes, Nathan Lindzey, Jeremy Spinrad, Vinicius dos Santos, Jayme Szwarcfiter

The class of threshold tolerance graphs was described by Monma, Reed and Trotter, who pointed out that their complements, the "co-TT" graphs, lie in between interval graphs and strongly chordal graphs. They have many other interesting combinatorial properties, and, like interval graphs, they have a space-efficient representation. They gave an $O(n^4)$ algorithm for recognizing whether a graph is a co-TT graph, hence whether a graph is a threshold tolerance graph. This has recently been improved to $O(n^2)$ for the special case when they are also split graphs by Golumbic, Weingarten and Limouzy. Using this last paper as a starting point, we develop an $O(n^2)$ algorithm for the general case.