Polynomial kernels for feedback set problems on special classes of digraphs.

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The existence of a polynomial kernel for a parametrized problem is of interest for practical purposes and gives a measure of the complexity of the problem.
We focus on the parametrized version of the feedback vertex (arc) set problem: given a directed graph D and a positive integer k, decide whether there exists a set of at most k vertices (arcs) of D, whose removal makes the digraph acyclic.
We discuss the existence of polynomial kernels for these parametrized problems on digraphs that are decomposable or have bounded independence number, including locally semicomplete digraphs and quasi-transitive digraphs.