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Title: Canonical antichains of permutations and permutation graphs

Abstract: We study permutations partially ordered by the pattern containment relation. This corresponds to the induced subgraph relation on the set of permutation graphs. It is well known that this partial order contains infinite antichains. We show that bipartite permutation graphs (or 321-avoiding permutations) contain a canonical antichain, i.e., an antichain A such that any subclass of bipartite permutation graphs containing finitely many graphs from A is well-partially ordered. We also show that split permutation graphs contain an antichain. However, the question whether this antichain is canonical remains an open problem.

Joint work with Colin Mayhill.