

Pattern-Avoiding Linear Extensions of Combs

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If we label the elements of an n -element poset P with the numbers in $[n]$, then we can view each linear extension of P as a permutation in S_n . Recently, Yakoubov studied the problem of counting the number of linear extensions of such a poset that avoid a collection of permutation patterns. She focused specifically on a special class of posets called combs and considered only patterns of length 3. In this talk, we will see a summary of Yakoubov's results, open problems, and conjectures. We then extend her results, answering some of her open problems and proving both of her conjectures.

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