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Sergi Elizalde* (sergi.elizalde@dartmouth.edu), 6188 Kemeny Hall, Hanover, NH 03755. *The most and the least avoided consecutive patterns.*

A permutation π avoids a consecutive pattern σ if no subsequence of adjacent entries of π is in the same relative order as the entries of σ .

I will show that the number of permutations avoiding the consecutive pattern $12\dots m$ —that is, containing no m adjacent entries in increasing order— is asymptotically larger than the number of permutations avoiding any other consecutive pattern of length m . This had been conjectured in 2001 by Elizalde and Noy. At the other end of the spectrum, the number of permutations avoiding $12\dots(m-2)m(m-1)$ is asymptotically smaller than for any other consecutive pattern. This had been recently conjectured by Nakamura.

The techniques used include the cluster method of Goulden and Jackson, an interpretation of clusters as linear extensions of posets, and singularity analysis of generating functions. (Received September 06, 2012)