

# **A Combinatorial Proof for 132-Avoiding Permutations with a Unique Longest Increasing Subsequence**

Nicholas Van Nimwegen, University of Florida

We define a permutation as having a Unique Longest Increasing Subsequence (ULIS) if it contains only a single increasing subsequence of maximal length. I provide a simple injective proof that the number of 132-avoiding permutations with a unique longest increasing subsequence is at least as large as the number of 132-avoiding permutations without a unique longest increasing subsequence.

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