Comment on volume 18(2) paper P5

Mesh patterns and the expansion of permutation statistics as sums of permutation patterns

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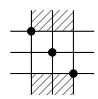
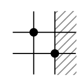
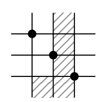
In Theorem 7 we show that $\pi \in \mathfrak{S}_n$ is an André permutation of the first kind if and only if it avoids

$\mathfrak{andr\acute{e}} =$  and  .

Here, the second pattern only serves to require that $\pi(n) = n$. It is the first pattern, $\mathfrak{andr\acute{e}}$, that plays the important role. In particular, $|\mathfrak{S}_n(\mathfrak{andr\acute{e}})| = E_{n+1}$ (Corollary 8).

Gábor [H. Gábor, André permutations and barred (generalized) patterns (2009), paper in preparation] has independently characterized the André permutations using a barred generalized pattern: $\mathfrak{g\acute{a}bor} = 4\text{-}\bar{1}\text{-}32$. In terms of mesh patterns,

$\mathfrak{g\acute{a}bor} =$ 

and it is easy to show that a permutation avoids $\mathfrak{andr\acute{e}}$ if and only if it avoids $\mathfrak{g\acute{a}bor}$.