Gil, Juan B.; Weiner, Michael D.
On pattern-avoiding Fishburn permutations. (English) [Zbl 1433.05009]
Ann. Comb. 23, No. 3-4, 785-800 (2019).

Summary: The class of permutations that avoid the bivincular pattern (231, \{1\}, \{1\}) is known to be enumerated by the Fishburn numbers. In this paper, we call them Fishburn permutations and study their pattern avoidance. For classical patterns of size 3, we give a complete enumerative picture for regular and indecomposable Fishburn permutations. For patterns of size 4, we focus on a Wilf equivalence class of Fishburn permutations that are enumerated by the Catalan numbers. In addition, we also discuss a class enumerated by the binomial transform of the Catalan numbers and give conjectures for other equivalence classes of pattern-avoiding Fishburn permutations.

MSC:
05A05 Permutations, words, matrices
05A15 Exact enumeration problems, generating functions
05A19 Combinatorial identities, bijective combinatorics

Keywords:
pattern avoiding permutation; Fishburn number; bivincular pattern

Software:
OEIS

Full Text: DOI

References:

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