

1102-05-117

Daniel A Daly* (ddaly@semo.edu) and **Lara K Pudwell** (lara.pudwell@valpo.edu). *Rook monoid pattern avoidance and connections to other combinatorial objects.*

The rook monoid is the set of $0 - 1$ $n \times n$ matrices with at most one 1 in every row and column. We generalize the notion of pattern avoidance for permutations to the setting of rook monoids and present some enumeration results that lead to connections with other objects. In particular, A-reducible elements of type B and rc-invariant permutations are in bijection with certain classes of rook monoid elements avoiding certain patterns. (Received July 25, 2014)