

Pattern Packing and Superpatterns in Circular Permutations

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Pattern avoidance in permutations is a classic enumerative combinatorial problem that is recently considered in circular permutations. The opposite of pattern avoidance can be considered in two different ways. The first is pattern packing. That is to contain as many copies of a given pattern as possible in a single permutation of given length. The second is finding superpatterns. That is to find a permutation (or pattern), as short as possible, that contains all possible patterns from a given set. We introduce these questions for circular permutations in this talk. Some interesting observations and questions will be presented.