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Interval pattern avoidance for K-orbit closures

Let $G = GL(n)$, $B$ the subgroup of upper-triangular matrices, and $K = GL(p) \times GL(q)$ where $p + q = n$. The group $K$ acts with finitely many orbits on the flag variety $G/B$, and one can study the closures of $K$-orbits just as one studies Schubert varieties, which are the closures of $B$-orbits. The set of $K$-orbits is parameterized by combinatorial objects known as $(p, q)$-clans. I will explain an older theorem relating interval pattern avoidance on permutations and singularities of Schubert varieties and how to extend this relationship to $(p, q)$-clans and $K$-orbit closures.

This is joint work with Ben Wyser and Alexander Yong.