

1009-52-76

**Ricky Pollack\*** (pollack@cims.nyu.edu), New York City, NY 10012. *Permutation Sequences and Pseudoline Arrangements, Old and New, Part I.*

We recall the combinatorial object “allowable sequence of permutations” and its role in encoding combinatorial properties of configurations of points and arrangements of lines. We then describe a simple generalization of this object to a “double-permutation sequence,” which similarly encodes configurations of disjoint convex sets. Both of these can also be used to encode combinatorial properties of more general objects: the first for configurations of points connected pairwise by pseudolines forming an arrangement, the second for connected sets with pairwise tangent pseudolines forming an arrangement. In addition we indicate how the convexity structure in the plane can be generalized to topological planes. This is joint work with Jacob E. Goodman. (Received August 05, 2005)