1035-05-804 **Robert Brignall**, **William Griffiths**, **Rebecca Smith*** (rnsmith@brockport.edu), **Vincent Vatter**, **Daniel Warren** and **Doron Zeilberger**. *Almost avoiding classes of permutations.*

Define a permutation of length n as an arrangement of the integers $1, 2, \ldots, n$. A permutation $p = p_1p_2 \ldots p_n$ is said to contain a pattern $q = q_1q_2 \ldots q_k$ if there is a sequence $\alpha_1, \alpha_2, \ldots, \alpha_k$ such that $\alpha_1 < \alpha_2 < \ldots < \alpha_k$ and $p_{\alpha_i} < p_{\alpha_j}$ if and only if $q_i < q_j$. Otherwise, the permutation p is said to avoid q.

There are several ways to consider "almost-avoidance" in terms of pattern avoidance. Past work has been done on counting permutations that contain a single copy of a given pattern. However, for this talk, when we say that a permutation almost avoids a permutation q, we will mean that one needs to remove at most one entry for the resulting permutation to avoid q entirely. We also extend this notion to pairs of permutations. That is, a permutation almost avoids a pair of permutations if the removal of at most one entry causes the resulting permutation to avoid both of the given patterns q_1 and q_2. (Received September 17, 2007)