# Enumeration Schemes for Restricted Permutations 

Doron Zeilberger<br>Department of Mathematics<br>Rutgers University<br>Piscataway, NJ 08854-8019<br>zeilberg@math.rutgers.edu

January 25, 2005


#### Abstract

Naive counting of sets of permutations of length $n$, avoiding a given set of patterns, is (usually) exponential-time, but if you can find a so-called Enumeration Scheme, then it only takes polynomially-long. Recently my student Vince Vatter extended my earlier notion of Enumeration Scheme, which resulted in a considerably better success rate. But it is still far from one hundred percent. Is there yet another extension?, or perhaps some patterns, like 1324 , will stay forever elusive?


