1107-05-250   **Jonathan Bloom*** (`jbloom314@gmail.com`), Department of Mathematics, Rutgers University, Piscataway, NJ 08854. *On two recent conjectures involving permutation patterns and statistics.*

In this talk we will settle two recent conjectures in the area of enumerative combinatorics. First, we answer a conjecture of B. Sagan by finding a multi-statistic preserving bijection between 1423-avoiding permutations and 2413-avoiding permutations. This new bijection also generalizes a classical result, in the area of pattern avoidance, due to Stankova. In the second part of the talk, we employ the techniques used to construct the aforementioned bijection to also prove a conjecture of E. Egge from 2011. In particular, we show that certain pattern classes are, surprisingly, counted by the large Schroder numbers. (Received January 16, 2015)