

1135-05-1449

Amy Grady* (agrady@clemson.edu) and **Svetlana Poznanovic**. *Sorting Index and Mahonian-Stirling pairs for labeled forests.*

Björner and Wachs defined a major index for labeled plane forests and showed that it has the same distribution as the number of inversions. We will define and study the distributions of a few other natural statistics on labeled forests. Specifically, we introduce the notions of bottom-to-top maxima, cyclic bottom-to-top maxima, sorting index and cycle minima. Then we show that the pairs (inv, Btmax), (sor, Cyc), and (maj, Cbtmax) are equidistributed. Our results extend the result of Björner and Wachs and generalize results for permutations. (Received September 22, 2017)