1085-05-127 **Ae Ja Yee*** (yee@math.psu.edu) and **Atul Dixit**. *Generalized higher order spt-functions.*

Two fundamental statistics in the theory of partitions are Dyson's rank and the Andrews-Garvan crank, which provide combinatorial proofs of partition congruences modulo 5,7, and 11. Recently, Andrews introduced spt(n), the number of appearances of the smallest parts in all partitions of n, and he showed how spt(n) is related to the second rank and crank moments. Since the introduction, the spt-function has attracted a lot of attention due to its rich properties, in particular its connections to the partition function p(n), ranks, and cranks. I will give a new generalization of the spt(n) in my talk. This is joint work with Atul Dixit from Tulane University. (Received September 05, 2012)