

1137-11-171 **Scott Ahlgren*** (sahlgren@illinois.edu), Department of Mathematics, University of Illinois,
1409 W. Green St., Urbana, IL 61822. *Congruences for mock modular forms and the smallest parts
function.*

The “smallest parts function” $\text{spt}(n)$ is a function of combinatorial interest whose generating function is essentially a mock modular form of weight $3/2$ for the full modular group. George Andrews proved the three congruences

$$\text{spt}(5n + 4) \equiv 0 \pmod{5}, \quad \text{spt}(7n + 5) \equiv 0 \pmod{7}, \quad \text{spt}(13n + 6) \equiv 0 \pmod{13}.$$

Among other things, I will discuss recent work with Byungchan Kim which shows that such congruences are rare in a certain precise sense. (Received February 02, 2018)