Abstract: I will describe explicit congruences modulo powers of arbitrary primes for three smallest parts functions (these extend and generalize previous results of Ono and of Garvan). This is joint work with Kathrin Bringmann and Jeremy Lovejoy. The proofs depend on $p$-adic properties of certain modular forms and mock modular forms of weight $3/2$ with respect to the half-integral weight Hecke algebra, and I will describe other number-theoretic applications of the same phenomena.